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THE READING INTERESTS OF GRADE FIVE PUPILS

by



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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Reading Interests of Grade Five Pupils," submitted by Margaret Theresa Stevenson in partial fulfillment of the requirements for the degree of Master of Education.

ABSTRACT

This study of children's reading interests in fiction was divided into three phases, and had three purposes: (1) to investigate the reliability of children's responses over a long and a short term to an instrument called a Q Sort, (2) to survey the reading interests of grade five boys and girls, and (3) to investigate the extent of agreement between responses to the instrument of particular grade five pupils and the responses made by their teachers in an attempt to predict the individual pupils' reading interests.

The sample used to investigate Phases I and II consisted of 391 grade five pupils (202 boys, 189 girls) classified as average and superior, from seventeen classrooms of the Edmonton Public Schools, Edmonton, Alberta. To investigate Phase III, a subsample of 48 superior pupils selected from the main sample, and their eight teachers, was used. Half of the pupils and half of the teachers were male; half were female.

The Q Sort, designed by the investigator, consisted of forty-four reading interest cards which the pupils sorted on three different occasions according to a predetermined distribution. The first and second occasions were four weeks apart, the second and third occasions were two to four days apart. Data retrieved from the three distributions of cards by the 391 pupils were used to investigate Phases I and II. Phase III used data retrieved from: (1) the first distributions of the reading interest cards as sorted by the

forty-eight superior pupils, and (2) the distributions of the cards as sorted by the eight teachers in an attempt to predict, individually, the reading interests of six of their superior pupils (three male, three female).

Data were analyzed for each phase of the study in the following manner. For Phase I, coefficients of correlation were calculated between each pupil's distributions of the cards on the first and second occasions, and on the second and third occasions, and means were calculated. Phase II used a frequency distribution of the reading interests of boys and of girls, cumulative over the three times the cards were sorted. For Phase III of the study, coefficients of correlation were calculated between each of the forty-eight pupils' first distributions of the cards, and the distribution made by his teacher in an attempt to predict the reading interests of individual pupils. Means were calculated and an analysis of variance carried out.

Highly significant correlations were found in the investigation of Phase I, giving an indication that the instrument is reliable, and could be used in further investigations of children's reading interests. The investigation of Phase II revealed that definite sex differences exist in reading interests of pupils at the age and grade studied: (1) grade five boys prefer stories with a high level of excitement, action, and often violence, in a modern setting, (2) girls appear to have wider and more varied reading interests

than boys do, and (3) present day grade five girls prefer more mature stories, and stories with a higher level of action and excitement than did girls of the previous generation. The investigation of Phase III revealed that the teachers involved knew the reading interests of their male pupils better than they knew their female pupils' reading interests. The teachers knew the reading interests of pupils in general to a significant extent. Generalizations cannot be made from the findings of Phase III of the study due to the small sample of teachers.

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Acknowledgement is made to the Edmonton Public School Board for permission to conduct the research. Appreciation is expressed to the seventeen teachers and 483 grade five pupils who participated in the study.

DEDICATED
TO THE MEMORY
OF MY DEAR SON
MORRIS ANDREW STEVENSON
WHO DIED SUDDENLY
MAY 29, 1968
AT THE AGE OF 18 YEARS 9 MONTHS

DECISION

You left the field and no one heard
A murmur from you. We,
With burning look and stubborn word,
Challenged the Referee--

Why he forbade you to complete
The run, hailing you back
Before your firm and eager feet
Were half-way round the track;

Unless he had contrived, instead,
To start you on a race,
With an immortal course ahead,
And daybreak on your face.

E. J. Pratt

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CHAPTER I

INTRODUCTION

The literature of education contains evidence of the importance of identifying, utilizing, and developing the reading interests of children in the daily program of the school. Investigations of children's reading interests to the present time have disclosed broad average trends which provide assistance to the teacher by indicating in a general way the reading interests of boys and girls at the age and grade she is teaching. This information is useful in the preparation of lessons aimed at class interests. However, since the last comprehensive study of children's reading interests (Norvell, 1958) took twenty-five years to complete, it cannot be considered a true indication of the reading interests of today's children.

Far more important than the differences at age and grade level is the range of interests within any group. Individual interests depend on the child's home and school background, the community he lives in, the children he plays with, and the quality and quantity of reading material available to him. It is not likely that two children would have many reading interests in common. Knowledge of a child's reading interests along with knowledge of his ability would give a teacher the opportunity to adjust the curriculum to meet his ability, needs, and interests. This knowledge could also enable a teacher to help a child with a personal problem by suggesting a

particular book to be read, as a child will often identify with a character who has a similar problem. Of course, the teacher must have a thorough understanding of both the child and the book.

Authorities are unanimous in ascribing to reading interests a strong motivating factor in learning the skills of reading and in applying these skills to literature and the content fields. It is pointed out also that teachers have a responsibility to use knowledge of a child's reading interests to help that child develop more mature interests and taste in reading. The principles of instruction should be to meet the child where he is in respect to interests and abilities, and then to guide him toward greater abilities and richer, more mature interests.

Authorities have expressed a need for an indication of the extent of change in children's reading interests over short and long periods of time. How stable are children's reading interests? Do they change more at one age than at another? Do girls' reading interests change more quickly than do boys' reading interests? These are questions that need to be answered.

Questionnaires, which are usually used to investigate children's reading interests, ask for lists of recently read or best liked books. As these choices are influenced by the availability and readability of books, it is questionable if they can be considered true reading interests. It would appear, then, that there is a need for a reliable instrument that would give an indication of change in children's

reading interests over a short and a long interval, that would survey the reading interests of the present day child, and that could be used to obtain information regarding the extent to which teachers know the reading interests of individuals in their classrooms.

I. STATEMENT OF THE PROBLEM

The problem investigated in this research has three separate phases. The first is a measure of the reliability of children's responses over a long and a short term to an instrument designed to investigate their reading interests. The second phase is concerned with what the present day boys and girls are interested in reading. The third phase of the problem considers the extent of agreement between what children indicate they would be interested in reading and what their teachers believe they are interested in reading. These three phases of the problem are discussed in the following paragraphs.

How quickly do children's reading interests change? Is it reasonable to expect teachers to perceive the reading interests of their pupils? There is no research investigating these problems as there has been no reliable instrument to use in investigating children's reading interests other than Norvell's (1958). Norvell calculated the correlation between two sets of scores for fifty poetry selections read to two groups of third grade classes. The children had checked the selections as being "interesting", "fairly interesting", or "uninteresting". The coefficient of correlation using the "product-moment"

formula was $0.951 \pm .009$. This provided evidence that interest scores secured from adequate numbers of children using Norvell's instrument provided reliable guidance in children's reading interests in poetry. It can be seen that an instrument that considers only poetry and has only three categories of responses would have limited application. A reliable instrument considering reading interests in prose would be valuable as a means of providing needed evidence regarding the stability of children's reading interests.

Most surveys of children's reading interests investigate children's actual reading habits. What children actually read is directly related to what reading material is available and the reading ability of the child, as a book that a child would be most interested in reading may not be available at all, or may be available at a reading level much above or below his ability level. It would appear that a survey of children's reading interests would be an invaluable aid to those who are responsible for selecting children's books - the teachers and librarians. Such information would also help the teacher to individualize the reading, language, and literature programs.

Authorities in education have stressed the importance of examining the interests of the individual child. How well do teachers understand the reading interests of individuals in their classes? The most recent contribution to research in this area was conducted by Norvell (1958). At the time it was published his study had been in process for more than twenty-five years, so it is obvious that it must

now be out of date, and further research in this area is indicated. Norvell's study was limited to teachers' perceptions of the reading interests of children as a group. There is no research investigating the extent to which teachers know the reading interests of individuals in their classrooms.

II. PURPOSE OF THE STUDY

The purpose of this study was: (1) to investigate the reliability of grade five pupils' responses to an instrument called a Q Sort. This instrument consisted of forty-four interest cards which the children sorted according to a predetermined distribution. (2) to conduct a survey of the expressed reading interests of grade five boys and girls. (3) to investigate the agreement between responses to the Q Sort of particular grade five pupils and the responses their teachers made to the Q Sort in an attempt to predict the reading interests of the pupils.

III. DEFINITIONS OF TERMS

1. Superior Students

Students who are classified as superior in the Edmonton Public Schools are initially identified in grade one. These students complete in five years the subject matter and skills they would normally complete in the first six years of school. One full year is spent in each of grades one and six. The content and skills of

grades two, three, four, and five are completed in three years instead of four.

Factors considered in classifying superior students are mental capacity, achievement in reading and arithmetic, emotional and social adjustment, maturity, and health. Tests of mental ability used to determine placement are Detroit Beginners' First Grade Intelligence Test and Lorge-Thorndike Level 1 Ap. As maturity is considered an important factor in the initial classification of superior students, the required intelligence score decreases as the chronological age increases. In this way older children are eligible with lower intelligence scores than those required for younger children.

Teachers' observations and decisions during the year are supported by standardized tests in reading and arithmetic administered in May. Currently in use are Gates-McGinitie Vocabulary Form A, Gates-McGinitie Comprehension Form A, and Seeing Through Arithmetic 1 Final Test (Edmonton continuous progress plan, 1967).

2. Fiction

"That which is feigned or invented especially a feigned or invented story" (Webster's new collegiate dictionary, 1965). For the purpose of this study fiction also includes myths, legends, fables, fantasy and hero tales.

3. Interest

"An interest is a characteristic disposition organized through

experience which impels an individual to seek out particular objects, activities, understandings, skills or goals for attention or acquisition" (Getzels, 1956, p. 7).

4. Reading Interest

For the purpose of this research reading interests are the items listed on the forty-four cards in the Q Sort. A child's reading interests are identified by his placement of the cards according to a predetermined distribution.

IV. HYPOTHESES

- I. To investigate the reliability of grade five pupils' responses to an instrument designed to determine their reading interests, the following null hypotheses were tested:
 - A. There is no significant correlation between reading interests expressed by the same sample of pupils on two occasions four weeks apart.
 - B. There is no significant correlation between reading interests expressed by the same sample of pupils on two occasions two to four days apart.
- II. In order to conduct a survey of the expressed reading interests of grade five boys and girls, a frequency distribution of their reading interests was used to establish the items most liked and least liked by boys and by girls.
- III. The third purpose of this study was to determine the extent of

agreement between the responses of particular grade five pupils to an instrument designed to determine their reading interests, and the responses their teachers made in an attempt to predict the reading interests of their pupils. To carry out this investigation the following null hypotheses were tested:

- A. There is no significant difference between male and female teachers in their ability to predict reading interests of pupils.
- B. There is no significant difference between male and female teachers in their ability to predict reading interests of male pupils and in their ability to predict reading interests of female pupils.
- C. There is no significant difference between teachers in their ability to predict reading interests of male pupils and in their ability to predict reading interests of female pupils.

V. DESIGN OF THE STUDY

Population and Sample

Grade five pupils classed as average to superior, in the Edmonton Public Schools, Edmonton, Alberta, constituted the population from which the sample was drawn. The same sample of children was used to investigate the first two problems of the study, that is, the investigation of the reliability of children's responses to the instrument, and the survey of the reading interests of the boys and of the girls. As a large

number of children was necessary so that generalizations could be made from the findings, all the boys and girls enrolled in seventeen grade five classes made up the sample.

These seventeen classes of grade five students were identified for our use in this study by officials of the Edmonton Public Schools, Edmonton, Alberta. Each class was composed of boys and girls classified on a range from average to superior according to criteria established by the Edmonton Public Schools. Expressions of the reading interests of the 483 children were obtained in response to a forty-four item Q Sort designed by the investigator. The children sorted the cards on three occasions. The first and second sorts were four weeks apart; the second and third sorts were two to four days apart. Information revealed by the Q Sort was used in the investigation of the long and short term reliability of the children's responses and in the survey of boys' and girls' reading interests.

A frequency distribution of reading interests expressed by boys and girls was used to determine the items that were most liked and least liked by boys and by girls. This frequency distribution included the expressions of reading interests on the three different occasions and was cumulative over the three sorts.

In the investigation of the extent to which teachers can predict the reading interests of their pupils, sample size was restricted by the amount of teacher time available for the research. Thus, a smaller group of children was selected from the original sample. The

boys and girls in the smaller group and their teachers composed the sample for the third part of the research.

The subsample of pupils and their teachers was selected in the following manner. Of the teachers of the seventeen classes identified for our use in this study, four were male and thirteen were female. The teacher sample selected from these was composed of the four male teachers and four female teachers randomly selected by the investigator from the thirteen. Under the investigator's direction, each of the eight teachers randomly selected three male and three female pupils from the superior pupils in his/her classroom. Thus, the sample used to investigate the third part of this study was composed of a group of forty-eight children selected from the original sample, and their eight teachers.

Analysis of the Data

To investigate Hypothesis I, scores were obtained for each of the three times the children sorted the interest cards. Pearson product-moment correlation coefficients were calculated for each child's first and second sorts, and also for his second and third sorts. The product-moment correlation coefficients were transformed to Fisher's 'z' correlation coefficients, and the mean for each set was calculated. The two mean 'z' correlation coefficients were transformed to product-moment correlation coefficients for easier and more meaningful interpretation. The resulting product-moment correlation coefficients give an estimation of the reliability of children's responses to the Q Sort over a long and a short term.

To investigate Hypothesis II the items most liked and least liked by boys and by girls were determined by means of a frequency distribution. Included in the frequency distribution were expressions of boys' and girls' reading interests as they indicated them by sorting the interest cards on three occasions. The totals were cumulative over the three sorts.

To investigate Hypothesis III, correlation coefficients were calculated for the responses of each teacher-pupil pair. These were transformed to Fisher's 'z' coefficient of correlation and F tests were carried out to assess differences between means.

VI. SCOPE OF THE STUDY

1. As the sample used in this research was limited to grade five children in Edmonton, Alberta, generalizations regarding the findings should be made only to grade five children in a similar locale.
2. The subsample used to investigate Hypothesis III included only superior grade five pupils, therefore any conclusions drawn must be restricted to a similar group.
3. Children sorted the forty-four interest cards on three occasions, the first two sorts being four weeks apart and the last two sorts being two to four days apart. Findings regarding the long and short term reliability of children's responses can only be meaningful in reference to similar periods of time.

VII. LIMITATIONS OF THE STUDY

1. The teacher sample used to investigate the extent of agreement between the children's expressed reading interests and the teachers' predictions of their pupils' reading interests was limited to a small number of teachers. Therefore, caution should be used in interpreting the findings and in generalizing from them.
2. Occasionally children classified as superior are not admitted to or are removed from the superior group at the discretion of parents and teachers. For this reason there may be pupils classified as superior who are not included in the population of superior students. Within the group of grade five children classified as superior there may also be some who have not maintained their superiority, and therefore may be incorrectly classified.

VIII. SIGNIFICANCE OF THE STUDY

Stress has recently been placed on the importance of individualizing the curriculum according to the needs and interests of the pupils. This indicates the necessity for research in the areas investigated in this study. Knowledge of the reliability of children's responses to the interest cards should provide valuable information regarding the reliability of the instrument. A reliable instrument would be useful as a means of investigating reading interests of pupils, thus providing information that could be used by teachers and librarians in planning individual and group projects and in providing suitable

reading material.

The survey of reading interests of grade five boys and girls should provide up-to-date information for librarians and teachers involved in ordering books for children. Such a recent list of boys' and girls' reading interests should also be a powerful tool for motivation in all areas of the curriculum. Further, children are exposed to a variety of communication media such as radio, movies, television, and comics. The extent to which these media influence children's reading interests is not certain, which underlines the importance of having available recent information regarding children's reading interests.

It has been stressed that it is important that teachers know the reading interests of individuals in their classrooms. If it is found that teachers do not know the reading interests of grade five boys and girls, this information should be made available to them by school librarians. If it is found that teachers do not know the reading interests of individual pupils, it is recommended that they avail themselves of this valuable information by means of interest questionnaires, personal interviews, observation, conversation, and other devices.

IX. SUMMARY

This chapter has provided an introduction to and a preview of the study. It was pointed out that there is a need for a reliable

instrument to investigate aspects of children's reading interests. Attention was drawn to the necessity for a teacher to know the reading interests of boys and of girls at the age level she is teaching. Also stressed was the importance of teachers knowing the reading interests of individuals in their classrooms. It was noted that a recent survey of children's reading interests would be a valuable aid to teachers and librarians.

The purpose of the study was developed from the problems, and was divided into three phases. The first was to investigate the reliability of children's responses to an instrument designed by the investigator to determine their reading interests. The instrument consisted of forty-four interest cards to be sorted in a pre-determined distribution according to a method called Q technique. The second purpose was to undertake a survey of children's reading interests, while the third purpose was to determine the extent to which teachers know the reading interests of individuals in their classrooms.

The sample participating in the study consisted of 483 grade five pupils and eight of their teachers. The method used in analyzing the data was outlined, followed by a discussion of the scope and limitations of the study. The chapter concluded with suggestions as to the significance of the study.

CHAPTER II

A REVIEW OF RELATED LITERATURE

The review of related literature first presents a psychological background to the study of interests. This is followed by a section concerning professional opinion and research on the importance of reading interests. Literature directly related to the three parts of the study is reviewed next. This consists of research investigating the ability of authorities, teachers, and librarians to predict children's reading interests, followed by a review of selected studies of children's reading interests over the last seventy years. The final section considers research designed to investigate the reliability of children's responses to instruments devised to determine their reading interests. A summary concludes the chapter.

I. PSYCHOLOGICAL BACKGROUND TO THE STUDY OF INTERESTS

Over the years several definitions of interest have been presented. Osterman (1899, p. 7) defined interest rather broadly as a consciousness or appreciation of value. Dewey (1913, p. 17) decided that the root idea of the term "interest" was that of being taken up, engrossed, or engaged with some idea because of its recognized worth. The most comprehensive definition is that of Getzels' (1956, p. 7): "An interest is a characteristic disposition, organized through experience, which impels an individual to seek out particular objects,

activities, understandings, skills, or goals for attention or acquisition." Getzels explained that the difference between an interest and a preference is that an interest is dynamic, whereas a preference is passive. A person could prefer a book about hockey to a book about football and not really be interested in either one. Finally, Harris (1950, p. 131) defined an interest quite simply as preoccupation with an activity when a child is free to choose. Harris would describe a child's interests by noting what he plays with, buys, collects, or utilizes when there is an element of spontaneity in the activity.

Smith and Dechant (1961, p. 270) set interest in the broad framework of motivation, and consider motives as falling into three categories: physiological motives, psychological motives, and habit motives. Physiological motives are often described as the primary drives, and include those that have provided for the very survival of man, such as hunger, thirst, and sex. These needs are tensions related to the striving of the organism to maintain a state of balance within itself. Whenever the body deviates from its state of equilibrium it is motivated to action by a homeostatic drive that seeks to return the organism to its steady state.

Although some psychologists believe that all human behavior can be accounted for by physiological drives, Smith and Dechant (1961, p. 271) point out that there also appear to be psychological motives for children's behavior. This is exemplified by the fact that children

will play long after need for exercise has been fulfilled. On this point, Harlow (1965) and Montgomery (1965) maintain that internal drive or motivation is of little importance to learning, and emphasize that interest is aroused by external stimuli. White (1959) further pursued this trend of thought in his article. He maintains that we need a different kind of motivational idea to account fully for the fact that man and the higher mammals develop a competence in dealing with the environment which they did not have at birth and certainly do not arrive at simply through maturation. One of the most obvious features of animal behavior is a curiosity drive, a tendency to explore the environment. White argues that this exploratory behavior is separate from the primary organic drives and thus constitutes an independent motive. This behavior appears to be incited by novelty in the environment. Some psychologists suggest there is a need for activity, and Harlow (1965) maintains that there is also a manipulative drive that is aroused by patterns of external stimulation. White combines these three drives, exploration, activity, and manipulation under the single heading of "competence". He feels competence motivates man to master his environment.

White sees boredom as a bad state of affairs about which humans try to do something. He cites Hebb (1949) as indicating that many of our activities, such as reading detective stories, fast driving, and skindiving give clear evidence of a need to raise the level of stimulation and excitement. Men seem bent on increasing the impact of the

environment, and even on creating mild degrees of frustration and fear. Problem solving and running mild risks seem to be inherently rewarding. Hebb maintains that men and animals will always act so as to produce an optimal level of excitation. He sees learning as being associated with movement toward this optimal level. Monotonous conditions provide too low a rate, whereas over-stimulation produces too much excitement and inhibits learning.

White summarizes his "competence" as being directed, selective and persistent. It is continued because it satisfies an intrinsic need to deal with the environment. An application of this theory to the classroom situation, especially to the teaching of reading, is obvious. Children come to school equipped with this competence drive in varying degrees. In their striving to master their environment they need to be provided with atmosphere and material that is neither boring nor overstimulating, but at the correct level of challenge each child.

Conceptual conflict, which has been found by Berlyne (1965) to have a motivating effect, appears to be related to White's theory that people need the challenge of problem solving. It is based on the theory that learning and retention are greater if a conflict situation is set up and there is a problem that must be solved. He cites the work of a Russian psychologist, Morozova (1955), who has completed several studies on the subject of "interest" in school children.

Morozova presented groups of eleven-to fifteen-year old children

with different variants of a written passage designed to teach them how to find latitude and longitude. The groups were tested on details of the content. Morozova found that the approach resulting in higher interest and better understanding was one in which a child hero was presented with the practical problem of finding his location, and so had to solve the various difficulties that this problem presented. On the basis of this and other studies, Morozova concluded that interest depends on the following conditions:

1. What is read must raise a question that is hard to answer.
2. There is a hero who is faced with the question.
3. The hero is engaged in an active search for an answer.
4. There is a central element of struggle against difficulties and perplexities.

Morozova is saying that the elements of conceptual conflict must be present. Identification with the hero enables the child to experience the conflict vicariously. The hero's success in solving the problem satisfies the reader's desire to find out the answers to the questions, and also stimulates desire to acquire further knowledge about the same topic.

Morozova also investigated the contents of books that were in demand in school libraries and those that were not in demand. The books for which there was the greatest demand and which the children presumably found interesting were ones that raised questions and encouraged

the children to think out answers before the information was supplied. Books that were left on the shelves were declarative in intent. They simply supplied information, raised few questions, and offered few chances for the child to think through a problem and arrive at answers on his own.

Morozova also stressed the interest-inducing method of presenting children with a piece of information, and then supplying them with another obviously discordant piece of information. An example is a situation in which children are told that plants require sunlight for the photochemical processes on which their growth and survival depend. Then it is pointed out to the children that there are plants called fungi that can live in the dark. The conflict produced should arouse sufficient interest that the children are motivated to read to resolve the conflict. Morozova reported more effective learning and greater retention with this method than by simply presenting the material to the children.

The third kind of motive described by Smith and Dechant (1961, p. 272) is called habit motive. According to Thorndike (1935, p. 212) habits are formed by a strengthening of a connection through repetition and reward. However, once formed, habits acquire their own ability to motivate. For example, a child is motivated to read because of a combination of extrinsic and intrinsic interests. But gradually, as his skill at reading increases, reading acquires a motivating force of its own.

What are the sources of these characteristic dispositions of individuals which we call interests? We do not know a great deal about the sources of human interests, but the following determinants have been identified.

The innate capabilities of a child play a significant role in the development of his interests. Children have different capabilities as regards intelligence, strength, motor co-ordination, and so on. Children have also inherited different constitutions, bone structures, heights, etc., which incline them toward or away from particular interests. The exact relation between inherited constitutions and capacities will probably never be known. But there is little doubt that capacities are related to interests, and that, in general, special fitness does incline children toward congenial interests. Harris (1950) found that there is, generally, a positive relationship between interests and reading interests. That is, a child will usually want to read about the things that interest him. But we must not assume that this is always so. A boy with a great interest in participation in sports may not be a reader at all, or he may like to relax with a detective story.

Witty and Kopel (1939), Russell (1961), and Gray (1956) emphasize the tremendous influence of the environment in moulding interests and in establishing the direction these interests will take. During the pre-school years the essential aspects of a given class culture are transferred from the parents to the child. Bandura and Walters (1963)

stress the importance of imitation in the establishment of the desired attitudes and interests. Children grow up in radically different social and reading environments, and as a result enter school with quite different backgrounds of experience, attitudes, interests, and behavior patterns. Gray (1956, pp. 11-13) reported on a study of five socio-economic levels in a particular center, and related the findings to reading interests. He reported that children of middle and upper middle class families develop desirable reading interests and habits. Schools make more progress with these children than with children from a lower socio-economic background because the reading materials in the schools relate more closely to their backgrounds and interests. Thus far we have been less successful in promoting keen interest in reading among children of the lower socio-economic groups. Of major importance seems to be the fact that their previous experiences have not predisposed them to reading or awakened interests that can be satisfied by reading.

One of the most important environmental factors that determine the reading interests of a child is simply what reading material is accessible to him. According to Russell (1961, p. 397), Lazar (1937) found that more books, magazines and newspapers were available in homes of higher socio-economic status and that, naturally enough, children read more widely and at a more mature level of interest in such an environment.

Schools, teachers, and classmates are important determinants

of interest in reading and of reading interests. Smith and Dechant (1961, p. 276) state that research indicated that pupils showed interest in books that the teacher was enthusiastic about. On the other hand, Russell (1961, p. 397) cites Rankin (1944), who found that twelve-to fourteen-year-olds relied on the recommendations of their friends, and did not regard teacher recommendations with favor. It is likely that children favor the recommendations of their peers more as they grow older.

A review of the literature regarding the basis of interest revealed that interest is generally placed within the broad framework of motivation. The three categories of motives - physiological, psychological, and habit - were discussed. It was learned that the most recent theories regarding interest are White's "competence" theory and Berlyne's theory of conceptual conflict. Research by the Russian psychologist, Morozova, has shown that conceptual conflict must be present if a high level of interest and understanding is to be maintained. Heredity and environment have both been found to be determinants of human interests. Inherited constitutions and capacities that help to determine a child's interests include such factors as intelligence, strength, motor co-ordination, bone structure, height, and weight. Environmental factors include socio-economic status, accessibility of reading material, and the influence of parents, teachers, and classmates.

II. THE IMPORTANCE OF READING INTERESTS

The importance of identifying, utilizing, and developing the reading interests of children has long been stressed by educators, especially those in the field of reading. Reading must become associated with experiences recognized by the child as being closely related to his needs and purposes. Dewey (1913) discussed the concept of interest in the learning process:

The genuine principle of interest is the principle of the recognized identity of the fact to be learned or the action proposed with the growing self; that it lies in the direction of the agent's own growth, and is, therefore, imperiously demanded if the agent is to be himself. Let this conditions of identification once be secured, and we have neither to appeal to sheer strength of will, nor to occupy ourselves with making things interesting (p. 7).

This points out the importance of identifying all children's interests, including their reading interests. The development of these interests gives direction and purpose to children's activity and integrity to their experience. Smith and Dechant (1961, p. 275) support this view, and relate interests specifically to reading in their statement that interests determine not only the area in which a child will make his reading choices but, more important, they determine how much he will read or even whether he will become a "reader" at all. Russell (1961, p. 377) agrees, and points out the reciprocal nature of interests and reading interests. Reading interests are closely related to a child's other interests because he is the kind of child he is, and because often reading can contribute to his other interests.

Authorities in the field of reading, including Russell (1961), Witty (1961), Dechant (1964), Bond and Tinker (1967), Strang (1957), Smith and Dechant (1961), Gray (1940), Robinson (1955), Jenkinson (1964), and Harris (1964), are unanimous in ascribing to reading interests a strong motivating factor in learning to read. Jenkinson (1964, p. 51) suggests that learning to read is not motivated by any extrinsic factors such as rewards or punishments proffered by teachers and parents, but depends instead on what the learner feels will advance his own self-esteem and interests. Bond and Tinker (1967, p. 488) extend this thought by stressing that nothing is more important in teaching reading than maintaining strong motivation. They point out that interest breeds motivation, therefore authorities on reading emphasize a vital relationship between interest patterns and both reading activities and progress. Over half a century ago Dewey (1913, p. 23) made the perceptive observation that "making things interesting" for the child should not mean that after the subject matter has been selected, the teacher should attempt to make it interesting. Rather, motivation should be intrinsic; the subject matter should be selected in relation to the child's present experiences, interests, and needs. This material should be presented in such a way as to enable the child to appreciate its relationship to what already has significance for him.

According to Harris (1964, p. 21) it is not sufficient to discover the children's interests and provide reading materials that

match them. He maintains that the teacher has a responsibility to use the children's present interests as a starting point from which to develop more mature interests. Authorities on the teaching of reading are in complete agreement on this point. Dechant (1964, p. 73) voices the general opinion in his statement that teachers must know the specific interests of each child as well as the level of the child's reading ability in order to help the child develop his own interests and taste in reading. In a further discussion on this point, Larrick (1953, pp. 523-531) claims that half the battle is won when children are able to read about things that are interesting to them. To provide the most effective instruction in reading, then, the teacher must use the child's present reading interests as motivation, and also as a point of departure for broadening his reading interests and stimulating new ones. The reading interests with which a child arrives at school provide the teacher with her opportunity. The reading interests with which the child leaves school can at least be partly her responsibility.

The individualizing of instruction in reading is made possible through attention to the reading interests and to the ability of each child. Shankman (1963, p. 414) stresses the importance of capitalizing on the integrating effect of interest. She explains that reading is part of a complex pattern which should involve individual differences. Gray (1940, p. 144) supports this statement, and adds that we must learn better than we know at present how to utilize the interests of

children in planning reading activities. Strang (1957, p. 171) agrees with this, but points out that interest cannot completely compensate for lack of reading skills.

Knowledge of the reading interests and of the problems of individuals in the classroom enables the teacher to direct a child to a particular book that could help solve a personal problem. Smith and Dechant (1961, pp. 316-320) present a list of the various types of elementary books that may have therapeutic values. They cover such areas as emotional conflicts, responsibility to others, physical handicaps, intergroup relations, and pioneers and others who achieved through hardship. Caution is advised in prescribing books as agents of personal or social change. According to McKillop (1956), children do not always react in the expected way. A youngster may not recognize, or may recognize and deny that he and the book's character are facing similar problems. Another limitation in this use of reading material comes from the tendency of people to choose reading material that supports their own feelings and attitudes, or to interpret material according to their own biases.

There are some interesting theories regarding the influence of interest that, to the investigator's knowledge, have not yet been validated by research. The theory that interest evokes effort was put forth by Dewey (1913). He expressed the view that interest and effort may have a reciprocal relation. If a book or article has meaning, use, and purpose for the child, he will put forth the effort that reading demands.

If his effort is rewarded by obtaining information or some other desired satisfaction, his interest will be increased. Another theory, as stated by Robinson (1955, p. 173) is that children learn to read more rapidly if they are interested in the materials used. This is given as a reason why knowledge of the reading interests of their individual students is of primary importance to teachers of reading. Harris (1950, p. 138) sees a relationship between proficiency and interest. He explains that, initially, interest helps carry a child through the practice necessary to master new skills. Then, as his competence increases, so does his interest.

There is little research dealing with the influence of interest, as it is considered difficult to measure. A study investigating the relation between interest and ability, and another investigating the relation between interest and reading comprehension are discussed in the following paragraphs.

Smith and Dechant (1961, p. 273) report that Nemoitin (1932) studied the performance of 150 high school seniors and found a "substantial and marked relationship" between ability and interest. High interest in a subject tended to be associated with high ability in that subject, and low ability with low interest. There is no evidence of a cause and effect relationship, that is, Nemoitin does not imply that the high ability caused the high interest or vice versa.

In an effort to discover the relationship between interest and reading comprehension, Bernstein (1955) used readability formulae to

rewrite two stories and make them exactly equivalent in readability. One story contained action, suspense, direct conversation, and colorful expressions which are all considered interesting to adolescents. The other story represented the type of long, wordy descriptions which children say they dislike. One hundred grade nine students in a large junior high school in New York read the stories and completed comprehension tests. Results indicated that the more interesting story was read with superior comprehension. This leads to the implication that school programs which encourage pupils to work in the areas of their interests create situations conducive to effective reading.

Reviewed in this section were the opinions of authorities in education who all consider it important for a teacher to know the reading interests of the age group she is teaching, and also the reading interests of individuals in her classroom. This knowledge is necessary so the teacher can be effective in motivating children, in attending to individual differences, in helping children develop mature reading interests, and possibly in attending to children's personal problems. Theories were discussed regarding the relationship between interest and effort, between interest and proficiency, and between interest and speed of learning. Although there is no research to validate these theories, they are generally accepted by authorities in education. Research was reviewed indicating that there is a positive relationship between interest and ability, and between interest and reading comprehension.

III. ABILITY OF AUTHORITIES, TEACHERS, AND LIBRARIANS TO PREDICT CHILDREN'S READING INTERESTS

Professional opinion agrees that it is important for a teacher to know not only the reading interests of the age group she is teaching, but also the reading interests of individual students in her classroom. The reasons are fully discussed in the preceding section. It is surprising, then, to find only two pieces of research aimed at discovering whether, in fact, adults mainly responsible for selecting literature for children do know the reading interests of children. The investigator could find no research whose purpose was to find the extent to which teachers know the reading interests of individuals in their classrooms.

Norvell (1958) obtained an expression of opinion on 107 poems sent to 290 representative children's librarians and teachers in grades four through six throughout New York State. The median experience of the participants was twelve years. Twenty-seven percent had masters' or doctors' degrees, 51 percent had bachelors' degrees, 22 percent had no degree. Usable replies were received from 151 of the 290 people questioned.

The respondents were asked to check in an appropriate column whether, in their opinion, a particular poem would be very interesting, fairly interesting, or uninteresting to children. Data from librarians' and teachers' questionnaires were summarized together because there were only about half as many replies from librarians as

from teachers, and also because inspection revealed a close correspondence between the two sets of replies.

The votes of children placed didactic poetry at the bottom in popularity, followed by poems about fairies, nature poetry, and war poetry. Twice as many librarians and teachers ranked didactic and nature poetry as "very interesting" as ranked them "uninteresting." Children not only ranked these poems as 'uninteresting', but placed them in the lowest tenth in interest to children. As far as the individual poems were concerned, the results could have been obtained by chance had teachers and librarians had no knowledge of children's likes and dislikes.

In addition, the reply of each respondent was examined separately, and his estimate of the popularity of each of ninety-eight poems was compared with the placement by the children. It was found that slightly more than half of the teachers and librarians were wrong more than twice as often as they were right. Since these adult opinions provide no better placement of poems for popularity than would allocation by chance, Norvell concluded that poetry lists based upon teachers' and librarians' opinions of children's preferences would be valueless.

Norvell also examined sixteen anthologies of children's poetry. One-third were edited by well known poets, and the rest by authorities on children's poetry. Examination of the anthologies revealed 1210 poems for which Norvell had children's scores. Sixty-two

percent of the poems were below average in children's interest, and only 38 percent were at or above the mid point of children's interest. Norvell maintains that these results were so much poorer than random choice that one is compelled to believe that these experts as a group were not well acquainted with children's likes and dislikes in poetry.

Arbuthnot (1957) cites Rankin (1944) who made a careful study of children's interests in library books of fiction. The population used in this research included pre-adolescent and adolescent children. Records were kept of their unguided, voluntary withdrawal of fiction from eight public libraries in centers scattered from Brooklyn to Chicago. In the top ten books as chosen by the children there was only one Newbery Medal selection, Caddie Woodlawn (Brink, 1935). Other Newbery Medal books ranked in the least popular books. As Newbery Medal books are selected by committees of adult authorities on children's literature, one could conclude that the authorities did not take into consideration, or were not aware of the expressed reading interests of children.

Arbuthnot (1957) maintained that we should not be surprised at this conflict between children's tastes and adult standards of what makes good literature. She said the value of Rankin's study is that it shows us what children are looking for in books. Children have indicated they like a brisk, objective style, clear-cut themes, characters who are real and understandable, stories with mystery, excitement, or romance, and stories which emphasize gaining a sense of

achievement. According to Arbuthnot, children know what books they like but not what books they are capable of liking. She pointed out that our responsibility as adults is to know their likes and dislikes, and then systematically to expose them to books that fulfill their needs, but at the same time have more permanent significance than comics or mediocre books that may satisfy them.

In her preface to Paul Hazard's Books, Children and Men, Bertha E. Mahony said about Hazard, "He shows how unerringly children themselves have chosen and saved the real books, discarding the false." Hazard maintained that adults have always attempted to oppress children by choosing their reading material for them, but that children will not let themselves be oppressed. Children will refuse to read any book if they do not find in it what they are looking for. Hazard concluded that book shops would sell few of those adult-chosen books if it were not for uncles and aunts who buy them as presents.

In summary, children have always known what books they liked, and have usually been willing to indicate their preferences. Adults have long considered that they knew what children wanted to read, but research indicates that they really are not well acquainted with what children like and dislike. There is no research to indicate whether or not teachers know the reading interests of individuals in their classrooms.

IV. RESEARCH RELATED TO CHILDREN'S READING INTERESTS

There have been at least two hundred careful studies of children's reading interests carried out over the past seventy years. Reviewed here are representative ones which time has proven to be classics, and some of the more recent studies. These are presented in chronological order.

In 1898 Vostrovsky completed what is claimed to be the first statistical study of children's reading interests. All the children (1,269) of all the schools in Stockton, California, filled out questionnaires regarding their borrowing from the Public Library. They were asked to indicate the name of the last book borrowed, why it was chosen, and how well it had been liked. In order to secure uniformity, the results in every case were reduced to percentages. Although the methods of collecting and analyzing data were unsophisticated by present day standards, this study revealed information that has been supported in later studies.

It was found that there was a marked difference between the sexes in reading interests, with girls preferring stories of domestic life and boys caring more for books of adventure. Girls showed a greater interest in fiction, while boys, as they grew older, expressed increasing interest in works of non fiction such as science and history. Also of importance was the finding that boys were not interested in stories about girls, while girls did read boys' stories. The most prominent characteristic was the large percentage of fiction that was read by both boys and girls.

Jordan's two part study (1926) investigated the reading interests of children aged nine to eighteen. The sample consisted of 3,598 pupils from four communities in New York. Each child listed his five favorite books and three favorite magazines. In the first part of the study it was found that boys preferred adventure stories, with fiction as their second choice. The majority of the books the girls chose were fiction, with juvenile fiction ranking second. Interest in fiction increased rapidly for both boys and girls from nine to thirteen years of age, while interest in books of juvenile fiction decreased rapidly in interest for both boys and girls.

The second part of Jordan's study was concerned with book selection and book withdrawal in eight public libraries in and around New York City. It was noted that boys' and girls' choices were almost entirely different, with girls choosing books from a smaller range of authors than the boys. Books that appealed to boys had themes of mastery, fighting, love of "sensory" life, and approval of scornful behavior. Stories that were popular with girls contained themes that appealed to maternal instincts, kindness, or attention to others. Girls showed little interest in non fiction.

Terman and Lima's publication (1931) was based on an experimental study of the qualitative and quantitative aspects of children's reading, with special reference to individual differences caused by age, sex, intelligence, and special interests. Included in the study were approximately 2000 children aged six to fifteen. Half

of these children were connected with the Stanford research on gifted children, and had IQ scores over 135 on the Stanford-Binet test. The other 1000 children made up a heterogeneous group consisting of all the children in every school room included in the study. Data were obtained from three sources - home, school, and the children themselves. Children kept records of books read over a two month period, and also filled out interest blanks. They marked best-liked reading interests on a checklist, and named books and magazines they enjoyed reading.

Terman and Lima reported that, for each age group, gifted children read three to four times more books than children of average intelligence, and that they read more non fiction and informational material. However, the greatest contrast was not in types of books read, but in the age at which they were read. A book that was well liked by an average child of eleven was likely to be read and enjoyed by the gifted child of eight. This difference was most notable in connection with the age at which myths, legends, and historical tales were enjoyed. It was also found that there were very specific sex differences in the direction of reading interests, beginning at age nine. Girls preferred poetry, sentimental fiction, stories of home and school life, and stories about domestic animals. Boys liked adventure, action, excitement, non fiction, science, and wild animal stories. Boys showed no interest in girls' stories, whereas girls showed a decided interest in boys' books.

The purpose of Lazar's (1937) study was to investigate the effects of intelligence and sex on reading interests. The sample consisted of 2027 children from thirteen elementary schools in New York. On a printed form each child answered questions regarding family background, reading interests, favorite books read recently, and school subjects liked and disliked. The information revealed marked sex differences in reading interests. Girls preferred novels, poetry, and stories of home and school, while boys chose detective stories and books dealing with science or invention. Reading interests common to boys and girls were mystery stories and history.

Lazar found that there was indeed a relationship between intelligence and the types of books liked. Bright boys preferred adventure, mystery, and detective stories while average and dull boys chose mystery, adventure, and detective stories in the order named. Bright girls preferred mystery, adventure, and fairy tales; average girls changed the order to mystery, fairy tales, and adventure. Dull girls placed fairy tales at the head of the list, followed by mystery and detective stories. It was also revealed that more dull boys than bright boys liked girls' books. However, when boys' books were liked by girls, most of the girls were in the bright group.

Thorndike (1940) prepared a list of annotated fictitious titles for his research. He compared the reading interests of fast and slow learners, and also the reading interests of boys and girls. Fictitious titles were used rather than actual reading experiences on

the theory that many interests would not appear in reported reading because children had found no suitable reading material on those interests. Children were instructed to circle "Yes" if they would like to read the story, "No" if they would not like to read the story, or "?" if they could not make up their minds. This reading interest questionnaire was administered to 101 rapid learning and 107 slow learning children in grades six, seven, and eight in a small suburban town in New Jersey. The frequency of choice was determined for each title for these two groups, and differences between these frequencies analyzed by means of chi square to determine which differences could not be attributed to chance. In a secondary phase of the study, interest patterns of boys and girls were studied.

Thorndike found that, in a determination of the pattern of reported reading interests, sex was a much more important factor than intelligence. The actual reading habits of the fast and slow learning groups were checked, and this information was combined with the questionnaire results. It was found that, although the children in both groups had the same topical interest patterns, the reading through which these interests were satisfied differed in quality and quantity. Fast learning children reported reading almost exactly twice as many items as slow learning children, the titles covered a wider range, and the material read was of higher literary quality. There were large differences between the sexes in many categories. Mystery and detective stories had uniformly high appeal to both boys and girls.

Violent adventure stories, sports stories, travel stories, and mythology appealed more to boys than to girls. If the story centered around a female character, it appealed to girls. If the main character was a boy, the story often appealed to both boys and girls. Stories of love and romance were emphatically accepted only by the girls, while realistic animal stories appealed to both sexes. It is interesting to note that, although the children reported a great deal of interest in a number of non fiction titles, their actual reading included a vast majority of fiction.

The most extensive study of children's reading interests was completed by Norvell (1958) after twenty-five years of work. In this research 24,000 children in grades three through six from schools in New York State filled out questionnaires. Titles of selections and their authors were listed in the first of four columns. Children indicated by checking with an "X" in one of the three remaining columns whether they considered a particular selection to be "very interesting", "fairly interesting", or "uninteresting". Norvell used a formula to compute an interest score for each selection whereby the number of "very interesting" responses was added to one half the number of "fairly interesting" responses. This sum was divided by the total number of responses for the selection.

Norvell found that in grades four to six boys enjoyed prose almost as well as did the girls. However, there was a wide divergence between boys and girls in their preferences for certain classifications

of prose. Boys preferred boys' books, myths, legends, hero tales, stories of animals, and biographies, while girls preferred book length stories, girls' books, and fairy stories. Both boys and girls ranked animal stories highest in interest, and biography second highest.

Of interest is the conclusion reached by Norvell that literary quality has little more influence on the reading interests of bright students than upon the reading interests of the less gifted. Norvell found no reading interest that he could say with assurance was more influential with bright children than with average or below average children, with the possible exception of humorous selections. In all else there is near identity in the reading interests of bright and slow children. The important difference is that bright children read at an earlier age the same kinds of selections that slower children read.

Norvell's findings agree with the findings of Terman and Lima (1931) and Thorndike (1940) regarding the influence of age on reading interests. They all found that the year to year changes in children's reading interests are gradual, and that these changes are more rapid in elementary school than in junior high or high school.

Peltola (1966) assessed the reading interests of children by means of a questionnaire that asked for a choice of a favorite character and the name of the book or books in which the character was found. The sample studied included the entire fourth and sixth grade enrolment (3,176 children) in the public schools of a mid-western

suburban community. Significant sex differences were found in the type of favorite character chosen. Boys chose male characters most frequently, and animal characters second most frequently. Girls chose female characters most frequently, then animal and male characters in almost equal proportion. The influence of mass media on children's reading is evidenced in the finding that books known by the greatest number of children had been before the public through one or more of the mass media. Peltola noted significant grade differences in the proportion of real and make-believe stories chosen, with grade four choosing a greater number of make-believe than did grade six. However, children in both grades chose more real than they chose make-believe.

To study patterns of recreational reading Peltola administered tests to a subsample of 823 children drawn from the original sample. Each child indicated which of thirty-eight books he had read, and answered four questions about each book read. If he answered three questions correctly, he was considered to have knowledge of the book. Significant differences were found in knowledge of the books, as more children with higher levels of reading achievement knew the books than did children with lower levels of reading achievement. Fourth grade boys showed more individuality in choice of books than did fourth grade girls, but there was great individuality shown by all children in their choices of recreational reading material. The change in the girls' interests from the fourth to the sixth grade seemed to be

the addition of new interests rather than the elimination of the old. For example, grade six girls listed all the choices of grade four girls, plus teenage romances and a few adult books. Boys in both grades preferred stories of adventure, stories of animals, and humorous stories. On the whole, sixth grade children chose fewer stories with elements of make-believe. Results of the study indicated that groups of children had read a variety of types of books, regardless of the type of book from which a favorite character was drawn.

Research throughout the last seventy years indicates certain trends typical of children in elementary school. There is evidence of diverging interests of boys and girls, beginning around age eight or even earlier. Intelligence does not appear to have a strong influence on reading interests, as it appears that bright children read much the same kinds of books as their less able peers, only at a younger age and in more quantity. It was also found that girls will read books that have boys as main characters, whereas boys are not fond of books with girls as main characters. The influence of television and radio on children's reading interests must not be overlooked. Many reading interests can also probably be traced to the increased availability and appeal of books on many subjects.

V. RELIABILITY OF CHILDREN'S RESPONSES

Although researchers in the field of children's reading interests agree that it is often difficult to be sure that the

responses children give to their instruments are reliable, there have been few studies carried out in this area. Norvell (1958) wondered if children in the third grade were too young to respond reliably to a simple type of questionnaire. He based his investigation on the premise that if two entirely different groups of the same population responded in substantially the same way to a considerable number of propositions, the uniformity could not be the result of chance or guessing. To answer the question, fifty poetry selections were read to two groups of third grade children: 384 children in one group, 388 children in the other group. Teachers made no comments, and no discussion was allowed. The children rated the selections as "very interesting", "fairly interesting" or "uninteresting". The coefficient of correlation for the fifty scores was $0.951 \pm .009$. Norvell concluded that this provided striking evidence that (1) third grade children know and can tell what they like and what they dislike, and (2) that interest scores secured from adequate numbers of children provide reliable guidance in children's reading interests.

Thorndike (1940) prepared a list of annotated fictitious titles to cover the range of children's reading interests in fiction and non fiction. Children were instructed to circle "Yes" if they would like to read the story, "No" if they would not like to read the story, or "?" if they were not sure. Taking part in the research were 101 rapid learning and 107 slow learning children in grades six, seven, and eight in a small suburban town in New Jersey.

Two months after the questionnaire was administered 178 of the 208 children gave the experimenter a list of the materials which they had read in the meantime. A comparison of the actual reading with the interests reported on the questionnaire revealed that, although the pupils reported a great deal of interest in non fiction titles, the actual reading indicated a vast majority of fiction titles. This was not followed up to determine whether non fiction titles at the appropriate level were not available, or whether the children's responses were unreliable.

Related to the question of the reliability of children's responses to an instrument designed to determine their reading interests, is the problem of the identification of children's interests. Although this is a recognized problem, there is little literature available on the subject. Young (1955) maintained that observation records of children often differ from inventory records. For example, a child may say he likes baseball because, in our culture, a boy of ten is supposed to like baseball. According to our cultural expectations, also, a girl is not supposed to be interested in mechanical toys or chemistry sets. Further, a child may indicate an interest that is a superficial expression of an underlying basic need for attention or belonging. That is, he may feign an interest in electricity when what he is really interested in is being part of the particular group that is studying electricity.

In summary, there is only one study (Norvell, 1958) that attempts to arrive at the reliability of the responses of two similar groups of children. These two groups were administered the same questionnaire designed to discover their reading interests. Results showed a coefficient of correlation of $0.951 \pm .009$. There is no research similar to the third phase of the investigator's study. The purpose of this phase was to discover the reliability of the responses of the same group of children tested over a long and a short term using an instrument designed to investigate the children's reading interests.

VI. SUMMARY

This chapter has reviewed recent theories regarding the psychological basis of interest in order to establish a background for the study. The emphasis at the present time appears to be on interest as aroused by external stimuli, as seen in theories considering exploratory and manipulative drives, activity, competence, and conceptual conflict. Interesting research carried out by the Russian psychologist Morozova (1955) supports these theories.

Professional opinion and research stress that it is important that the teacher know the reading interests of the age group she is teaching, and also the reading interests of individuals in her classroom. This is desirable so she can individualize instruction, motivate her students, select reading material for the classroom, help children

develop more mature interests and tastes, and help children with their personal problems. In spite of the importance of this area, there are only two studies investigating the influence of interest. One establishes a relationship between interest and ability, and the other between interest and reading comprehension.

Research and professional opinion directly related to the three phases of the study were reviewed next. In spite of the acknowledged importance of teachers knowing the reading interests of individual students, the investigator found no research in this area. There were two studies indicating that teachers, librarians, and authorities were not well acquainted with the reading interests of children as a group.

There have been many surveys of children's reading interests dating back over seventy years. They revealed that boys and girls have tended to remain interested in about the same kind of literature through the years. Mystery, dangerous adventure, and wild animal stories have always appealed to boys, while girls have always preferred mystery, mild adventure, and romance. Age and sex of the child determine his choices to a greater extent than does his intelligence. Today's child reads more widely and has more mature reading interests than did his parents or grandparents at the same age. This is probably the result of the influence of the mass media, and, of the great number and variety of books available to children today.

With the exception of one study (Norvell, 1958), the question

of the reliability of children's responses to an instrument designed to discover their reading interests has not been investigated. Norvell found that two similar groups of children responded reliably to his instrument. He was looking at a different aspect of reliability than was the writer, who investigated the extent of agreement in responses to the instrument made by the same children over a long and a short term.

CHAPTER III

THE PLAN OF THE STUDY

Described in this chapter are the population and sample with the rationale for their selection. This is followed by a discussion of the design. The construction of the instrument is then discussed and the items included in it are listed. Q methodology is described, its advantages and disadvantages pointed out, and reasons given for its particular suitability to this research. Following is a description of the pilot study, its objectives and findings. In the final section of the chapter the procedure of the research proper is outlined, concluding with the analysis of the data.

I. POPULATION AND SAMPLE

All grade five pupils in the Edmonton Public Schools, Edmonton, Alberta, constituted the population from which the main sample was drawn. This sample, consisting of 483 children, consisted of the entire enrolment of seventeen grade five classes selected for our use by officials of the Edmonton Public Schools. These subjects were used to investigate two problems in this study. The first problem concerned the reliability, over a long and a short term, of children's responses to an instrument designed to determine their reading interests. This instrument, called a Q Sort, consisted of forty-four reading interest cards that the children sorted on three occasions

according to a predetermined distribution. The second problem concerned the frequency distribution of reading interests as expressed by the children in response to the Q Sort. A large sample of children was needed for both investigations to ensure reliability of the results. Since the responses of children who were absent on any of the three occasions were discarded from the study, the final sample consisted of 391 children (189 boys and 202 girls).

All children who took part in this research were from schools with central libraries. It was considered necessary to set this limitation so all students would have approximately equal access to books. Nearness to public libraries was not considered important, as bookmobiles bring library facilities to areas of the city not served by main or branch libraries.

Children at grade five level were chosen for this research because they usually have established enough skill in the basic processes of reading to permit them to read widely. They have intensely curious minds, are fascinated by far away places and distant times, and like to project themselves into the future. At no other time in their lives do they read as widely or in such quantity (Russell, 1961, p. 362). For these reasons grade five pupils presented an ideal group for research into children's reading interests.

The third problem investigated was concerned with the extent of agreement between pupils' expressed reading interests and teachers' predictions of the pupils' reading interests. From the teachers of the

seventeen classes, the four male teachers and a random sample of four female teachers were selected to participate in this phase of the study. Each teacher was asked to predict the reading interests for six of his/her pupils, three male and three female, selected at random from among the pupils classified as "superior" by the Edmonton Public Schools. The size of the pupil sample was small due to the amount of teacher-time required to make predictions for each subject. Superior students were chosen for this phase of the study since, with a small sample size, it was desirable to restrict the influence of extraneous variables such as reading ability and interest in reading. In each of the seventeen classes used in this study were some children classified as average students and some classified as superior students.

Originally it was planned to use all seventeen teachers as the teacher sample in this part of the investigation, and the study was begun on this basis. The imbalance in representation by sex (four male vs. thirteen female teachers) made it impossible to compare on an equal basis the responses of male and female teachers. Consequently, it was decided to use the four male teachers together with four female teachers randomly selected by the investigator from among the thirteen.

Under the direction of the investigator, each of the eight teachers randomly selected three male and three female pupils from among the superior pupils in his/her class. Thus the teacher-pupil sample used in the investigation of this phase of the study consisted

of four male and four female teachers, and twenty-four male and twenty-four female pupils, making a total of eight teachers and forty-eight pupils.

II. DESIGN OF THE STUDY

The first and second parts of this research involved the participation of the main sample of 391 grade five boys and girls. Each child sorted the forty-four interest cards that made up the Q Sort according to a predetermined distribution. This was done on three different occasions. The first and second occasions were four weeks apart, the second and third occasions were two to four days apart. Data were collected the three times the cards were sorted, and processed in the following manner.

To investigate the reliability of children's responses to the Q Sort over a long and a short term, a Pearson product-moment coefficient of correlation was calculated for each child's first and second sorts, and for his second and third sorts. These were transformed to Fisher's 'z', and a mean 'z' score calculated for the first and second sorts and for the second and third sorts. The mean 'z' scores were transformed to Pearson product-moment coefficients of correlation, thus providing a measure of the reliability of children's responses to the Q Sort over a long and a short term.

To conduct a survey of the most liked and least liked reading interests of the boys and of the girls, a frequency distribution was used. This was cumulative over the three occasions the cards were sorted.

The purpose of the third phase of the study was to establish the extent of agreement between the responses to the Q Sort of each child and his teacher. A three-factor nested design was decided upon for this phase because it enabled the investigator to establish a measure of the relationship between the responses made by each child and the responses made by his teacher in an attempt to predict the child's reading interests. A Pearson product-moment coefficient of correlation was calculated for each child's responses and the responses made by his teacher. These were transformed to Fisher's 'z' coefficients of correlation, and F tests were carried out to assess differences between group means.

The design used in the third phase of the study is illustrated in Figure 1.

		MALE TEACHERS				FEMALE TEACHERS			
		1	2	3	4	5	6	7	8
MALE PUPILS	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3	3
FEMALE PUPILS	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3	3

FIGURE 1

THREE-FACTOR NESTED DESIGN

This may be considered a three-factor experiment, the factors being sex of teacher(A), individual teacher(B), and sex of pupil(C). Teachers 1,2,3, and 4 are male; teachers 5,6,7, and 8 are female. Therefore, in this design the teacher factor is considered nested under the sex-of-teacher factor, that is, factor B is nested under factor A.

Since male and female pupils can have either a male or female teacher, the sex-of-pupil factor is not nested under the sex-of-teacher factor, that is, C is not nested under A. Further, since there are both boys and girls in the classroom of every teacher, sex-of-pupil factor is not nested under the teacher factor, that is, C is not nested under B.

In summary, to investigate this phase of the study a three-factor nested design was used. The three factors were sex of teacher(A), teacher(B), and sex of pupil(C). Factor B is nested under factor A, but all other relationships are those of a factorial experiment (Winer, 1962, p. 186).

III. INSTRUMENTATION

The review of selected research on children's reading interests found in Chapter II indicated that the instruments used were either questionnaires or checklists, or a combination of both. Without exception the questionnaires asked for titles of books actually read, although other information that was requested varied

according to the objectives of the studies. For example, Peltola (1966) asked for favorite characters and the titles of the books in which they were found, while Terman and Lima (1931) requested that each child list favorite books and magazines. In some cases information regarding a child's actual reading was obtained from the library, home, and/or school as well as from the child. An instrument that surveys the actual reading of children has two disadvantages in that children's reading choices are limited by the readability level and the availability of books.

That is, children list books they have been able to read from the selection of books that were available to them. This kind of instrument could be investigating children's reading preferences rather than their reading interests. This means that a child may be indicating a preference among a few books, none of which he is really interested in reading. He may not be able to find a book about something he is really interested in, at the level he can read.

Thorndike (1940) recognized the limitations of the use of children's actual reading, so decided to use a list of fictitious titles. Children responded by circling "yes", "no", or "?" indicating whether or not they would like to read a book by that title. Two to nine titles were listed under each of fourteen different areas or reading interests. For example, under "Talking Animal Stories" two titles were listed: Buster Bear's Birthday and Bob the Beaver Builds a Dam. By using this method Thorndike was able to avoid the problems of readability and availability, and investigate what children were actually interested in reading. However, the narrow range of titles offered in

some of the reading interests would be restrictive. For example, a child could be interested in talking-animal stories but not like either of the titles offered. Thorndike might have obtained different results with a wider range of titles.

Terman and Lima (1931) used a combination of a questionnaire asking for actual books read and a checklist of reading interests, which were areas in which children might like to read. Examples of reading interests used are mystery stories, science, poetry, and stories of home and school life. The list used by Terman and Lima was an attempt to cover the complete range of children's reading interests. A problem is seen in that many of the reading interests listed represent complete areas of reading or fields of knowledge, and could be subdivided many times. For example, science includes physics, chemistry, astronomy, animals, plants, weather, etc., and an indication that a child liked to read in the area of science would not tell a teacher enough to enable her to individualize the child's reading or assignments.

The investigator decided to use a list of reading interests in order to eliminate the factors of readability and availability of books. It was also felt that the use of such a list would ensure an indication of both present and potential reading interests of children. Because it was considered impossible to cover adequately the wide range of children's reading material available today, it was decided to concentrate solely on fiction, as children have indicated it is their favorite reading at the age and grade considered in this study.

In order to compile a list of reading interests in fiction, a careful study was made of the research and literature that was reviewed in Chapter II. In addition, Children's Catalog(1966) was thoroughly examined so that all reading interests of the present day child would be included. From the information gathered, the following broad categories of children's reading interests in fiction were identified: animal stories, historical fiction, biographical fiction, travel, humorous tales, fairy tales, magic and fantasy, sports stories, adventure, mystery, romance, science fiction and mythology. These categories were subdivided, care being taken to ensure that the items were mutually exclusive and to use vocabulary suitable for grade five children. As an example, the reading interest "animal stories" was represented by the following items: a story in which animals talk to each other, a story that includes wild animals and people, a story about animals as pets of boys and girls, a story just about wild animals, and a story just about tame animals. The list was reviewed by authorities both in children's literature and in school libraries, by parents, by teachers, and by children at grade five level. After the pilot study (described in part V of this chapter) the list was modified by the addition of two items.

Following is a complete list of the forty-four reading interests included in this research. Each reading interest was printed on a separate card, the complete deck of forty-four cards comprising the instrument used. Decks of the cards were sorted by children according to a particular method called Q technique which is described in detail following the list of reading interests.

1. A story in which animals talk to each other.
2. A story that includes wild animals and people.
3. A story about animals as pets of boys and girls.
4. A story about school life, in which girls are the main characters.
5. A story about school life, in which boys are the main characters.
6. A story about boys taking part in outdoor sports such as hockey, baseball, skiing, football.
7. A story about girls taking part in outdoor sports such as softball, swimming, tobogganing.
8. A story about the life of a famous woman.
9. A story about the life of a famous man.
10. The classic or old fairy tales such as Snow White, The Ugly Duckling, Cinderella.
11. Modern fairy tales and folk tales such as those from Africa, Ireland or Canada.
12. Legends or tall tales that tell about the adventure of a hero.
13. Humorous or funny tales from many lands.
14. Stories about imaginary people who were supposed to have lived long ago.
15. Stories about how boys and girls really lived long ago.
16. Stories about how boys and girls live now, their home life and activities.
17. A book about children travelling in our land or other lands.
18. Stories about space travel.
19. Mystery stories.
20. Adventure stories that are lively, but not dangerous.
21. Adventure stories about dangerous and exciting happenings.
22. Science fiction.
23. Westerns, cowboy stories, or life in the early west.
24. Religious stories.
25. Stories that teach a lesson.
26. Stories about children from other lands.
27. Stories about careers, such as being a doctor or a nurse.
28. War stories.
29. Stories about how boys and girls celebrate holidays such as Christmas or Thanksgiving.
30. Stories of home life with babies or young children as the main characters.
31. Stories of witches and ghosts.
32. Funny stories about everyday life.
33. Funny stories about things that couldn't possibly happen.
34. Stories about patriotism, that is, being loyal to your country.
35. Stories about the courage and bravery of boys and girls.
36. Stories of magic and magical happenings.
37. Stories in which mechanical things, such as cars, airplanes, or boats are the main characters.
38. Stories about romantic love.

39. A story about boys taking part in outdoor activities such as camping, hiking, boating.
40. A story about girls taking part in outdoor activities such as camping, picnicking, hiking.
41. A story just about wild animals.
42. A story just about tame animals.
43. Detective stories.
44. A story about something that really happened.

IV. Q METHODOLOGY

It was considered impractical to ask nine-to-eleven year old children to number a list of forty-four reading interests in order of preference. Consequently each of the reading interests was printed on a card the size of a playing card, the forty-four cards composing a deck of cards that could be sorted by the child. Each child was provided with a deck of the cards. Q technique was then used in sorting the cards which are called Q sorts.

Q technique is a form of rank ordering objects and then assigning numerals to subsets of the objects for statistical purposes. The set of objects could be cards containing verbal statements, single words, phrases or pictures. The subject is asked to sort the cards according to the way he approves or disapproves of them. Because Q sorts usually contain from 40 to 100 cards it would be difficult to rank order them, so the sorter is instructed to put varying numbers of cards in several piles. The distribution is decided arbitrarily. It is possible to use a rectangular distribution, that is, the same number of cards in each pile, or even to allow sorters to place the cards as they like within the number of piles decided on. For the purpose of this study the

subjects were instructed to put varying numbers of cards in the piles, the whole making up a normal distribution.

Most	2	5	9	12	9	5	2	Least
Like	7	6	5	4	3	2	1	Like

The illustration above indicates the distribution of the seven pile sort that was used. Numbers 2, 5, 9, 12, 9, 5, and 2 represent the number of cards placed in each of the seven piles. The whole represents a rank order continuum from "Most Like" to "Least Like" with varying degrees of like and dislike between.

The numbers below the lines, 7, 6, 5, 4, 3, 2, and 1 are the values assigned to the cards in each pile. That is, the two cards at the left that were most liked were given a value of seven, the five cards that were liked next best were each given a value of six, and so on. The forty-four cards in the Q sort were numbered for ease in assigning the values (Appendix A). All statistical analyses were based on these latter values. Coefficients of correlation were computed in order to find the relation between two distributions.

One main advantage of Q methodology is that it is peculiarly suited to intensive study of the individual. One person can sort the Q sorts many times and the data from such sortings can be analyzed quite objectively. The main criticism directed against Q methodology is that because it is a forced procedure the independence of choices is violated. This means that the placement of one card somewhere on the continuum necessarily affects the placement of other cards. It is possible to minimize the lack of independence in the forced choice by telling the

subjects that they are free to move the cards from one pile to another at any time right to the end of the sorting procedure.

Q sorting has also been criticized because it sacrifices level and scatter. All individuals have the same general mean and the same general standard deviation. The answer to this criticism would be to use another measure if level and scatter are important. Since rank order was important to this study but level and scatter were not, the method of Q sorting was decided on as the most efficient and effective measure.

V. PILOT STUDY

In February, 1968, a pilot study was conducted in a grade five classroom at Leduc, a small town close to Edmonton, Alberta. The objectives of the pilot study concerned the following aspects of the research:

Instrument

To obtain opinions and suggestions from the children and teacher regarding the extent to which the reading interests were complete, mutually exclusive, easy to read and easy to comprehend.

Teacher

1. To establish the amount of time it would take a teacher to rank the Q sorts for 10 children.
2. To establish whether or not sorting the cards for 10 children was a reasonable task to expect of a teacher.
3. To initiate a teacher approach that was tactful and non-threatening.
4. To obtain, if possible, a candid opinion from the teacher regarding the approach used.

Pupils

1. To establish the amount and kind of instruction necessary.
2. To observe children's ability to handle both a five pile distribution and a seven pile distribution of the Q sorts.
3. To establish the usefulness of a worksheet devised by the investigator on which the pupils could sort the cards and record the results (Appendix B).

It was found that reading and understanding the content of the items of the instrument presented no problem to grade five children. Suggestions from the pupils resulted in the addition of two items to the list of reading interests (Numbers 43 and 44). Pupil instructions were adjusted and finalized following the pilot study. Incorporated in the instructions was a suggestion that the children turn the cards over once the final choices had been made, as several children expressed concern that their classmates could see how they had sorted their cards.

None of the children had any difficulty sorting the cards into seven or five pile distributions. A check of the worksheets revealed that records of all choices were made completely and correctly. On this basis it was decided to use the seven pile distribution for the research proper as it discloses finer shades of differences.

During the hour the children were reading and sorting the cards and recording the numbers on the worksheets, their teacher was able to sort the cards for six children, using both a seven pile and a five pile distribution. On this basis it was decided to adjust the teacher task in the research proper and ask each teacher to sort for three boys and three girls.

Teacher approach was a very important aspect of the research

proper as its implementation depended on securing the teachers' complete cooperation. In order to avoid a situation that might appear to threaten the teacher it was necessary to use an approach that was tactful and reassuring. After discussion with the teacher involved in the pilot study it was decided that maximum importance would be placed on the question of the difference between male and female teachers in their ability to perceive the reading interests of male and female students, and on the contribution the teachers would be making to this research. This approach was used throughout the research proper. The teachers involved in the research were most cooperative and keenly interested in the study.

VI. PROCEDURE

During the months of May and June, 1968, the investigator completed three visits to each of the seventeen classes involved in the research. The first and second visits were exactly four weeks apart, the second and third visits from two to four days apart. Visits were scheduled for the same hour of the day for each class, for example, if the first visit to a class was scheduled for 9 a.m., the second and third visits were also made at 9 a.m. This was done in an effort to control for extraneous variables such as pupil tiredness or hunger that might influence the way pupils sorted the cards. The investigator made all the classroom visits and gave standardized instruction in each case, thus minimizing instructor and instruction variables.

Prior to the first round of visits to the schools the investigator contacted each of the seventeen principals by phone and explained the nature of the research. Consent to take part in the research was obtained from each teacher involved. Teachers were told only that the research pertained to children's reading interests. The nature of the teacher task was not divulged to them. It was felt that such knowledge might prompt the teachers to digress from their usual observations of individual differences in reading interests, resulting in contaminated information.

On the first visit to each class the investigator explained the nature of the task to the teacher. A random selection of three male and three female pupils was made from among the superior students. The teacher then retired to the staff room to sort the cards according to the way he perceived the reading interests of the six superior pupils.

While the teacher was occupied with his task, the investigator involved the complete class in sorting the cards according to their own reading interests. The cooperation of the children was assured by explaining that information from the distribution of the cards would help teachers and librarians choose more suitable library books for them, books that they would "really be interested in reading."

Each child was provided with a deck of Q sorts and a worksheet. The class was instructed to read the cards carefully and to put them into two piles, those they liked the most on the left and those they liked the least on the right. The piles were to be approximately equal, with no fewer than sixteen cards in either pile. From the pile of "most

like" cards the children then chose two they liked the very most and placed them at the far left side of the worksheet. The five that were liked next best were then selected, followed by the nine liked just a little bit less. Any cards that were left in the "most like" pile were then placed in the twelve card pile in the middle.

The children were then instructed to take the cards they had identified as "least liked." From these the two interests that were liked the very least were selected, and put in place at the far right side of the worksheet. Working toward the left, the children next selected five cards that were liked just a little bit, then the nine that were liked a little bit more than the five. Last, any remaining cards were placed in the twelve card pile in the middle.

During the sorting process the children were encouraged to ask questions and to move the cards around until they were sure the Q sorts were exactly the way they wanted them. It was carefully explained that starting from the far right pile, that is, the two that were least liked, each pile of reading interests should be liked a little more until the two most-liked were reached on the far left.

When the children were satisfied with the distribution of the cards, the identifying number on each card was written in the proper place on the worksheet. Sheets were checked to make sure that each number was transferred correctly. The whole procedure took approximately one hour.

The second time the cards were sorted only a brief review of the procedure was needed. The children were instructed to sort the

cards the way they felt about them that day, not to try to remember how they had sorted them four weeks previously.

For the third sort no instructions regarding procedure were needed, as only two to four days had elapsed since the second sort. It was considered necessary to impress upon the children that they were not expected to try to remember how they had sorted the cards the first or second time, but were to sort them the way they felt about them that day. The second and third times the cards were sorted the children needed thirty to forty-five minutes. The teachers involved in the research did not have to sort the cards a second or third time.

If a child was absent for any of the three occasions the cards were sorted, all of that child's data were withdrawn, as it was necessary to have data from three distributions of the cards for each participating child. Exceptions were made for the superior students for whom the teachers had sorted the cards. In order to have complete sets of data for each of these children, the investigator made extra trips to the schools if they were absent for any one of the three occasions when the reading interest cards were sorted. The final sample was 391 grade five pupils, of whom 189 were male and 202 female.

Data were retrieved from each child's distribution of the cards by assigning a value to each item according to its position in the distribution. Values assigned were 7,6,5,4,3,2, or 1, with most-liked items receiving seven, those liked next best receiving six, and down to the least-liked items which received a value of one.

VII. TREATMENT OF THE DATA

To investigate Hypothesis I, scores were obtained for each of the three times the children sorted the interest cards. Pearson product-moment correlation coefficients were calculated for each child's first and second sorts, and also for each child's second and third sorts. The product-moment correlation coefficients were transformed to Fisher's 'z' correlation coefficients, and the mean for each set was calculated. The two mean 'z' correlation coefficients were transformed to product-moment correlation coefficients for easier and more meaningful interpretation. The resulting correlation coefficient gave an estimation of the reliability of responses over a long and a short term.

To investigate Hypothesis II, the items most liked and least liked by boys and girls were determined by means of a frequency distribution. Included in the frequency distribution were the expressions of boys' and girls' reading interests as they indicated by sorting the interest cards on three occasions, cumulative over the three sorts.

To investigate Hypothesis III, correlation coefficients were calculated for the responses of each teacher-pupil pair. These were transformed to Fisher's 'z' correlation coefficients, and F tests were carried out to assess differences between group means.

All statistical treatment was done by IBM computer according to programs prepared by statisticians in the Division of Educational Research Services, University of Alberta, Edmonton.

VIII. SUMMARY

Seventeen grade five classes were selected for our use by Edmonton Public School officials. The entire enrolment of 391 children constituted the sample for phases one and two of the study. The first phase was concerned with the reliability over a long and a short term of children's responses to an instrument designed to investigate their reading interests. Phase two consisted of a frequency distribution of the reading interests of the boys and of the girls. The third phase of the study used a selected subsample of twenty-four boys and twenty-four girls and their eight teachers, four of whom were male and four female. From each teacher's classroom three boys and three girls classified as superior had been selected. The purpose of phase three was to examine the extent to which teachers knew the reading interests of individuals in their classrooms.

The instrument that was used consisted of forty-four cards on each of which was printed a reading interest. The cards were sorted by the children on three different occasions using a method called Q technique. The first and second occasions were four weeks apart, the second and third occasions were two to four days apart. The children placed the cards in seven piles with a predetermined number of cards in each pile. The criterion used for sorting the cards was whether the child would or would not like to read a book about each item that was printed on the cards. The information revealed by the children's three distributions of the cards was used to investigate phases one

and two of the problem. For phase three the cards were sorted once by each of the eight teachers in an attempt to predict the reading interests of the three boys and three girls selected from his/her class.

A pilot study was carried out in a grade five class at Leduc, Alberta, before the research proper was begun. The purpose of the pilot study was to test the instrument and to finalize teacher and pupil instructions.

Pearson product-moment correlation coefficients were used to give an estimate of the reliability of the children's responses to the instrument over a long and a short term. A frequency distribution determined the items that were most liked and least liked by boys and by girls. This was cumulative over the three sorts. To calculate the extent of agreement between teacher and student sorts, Pearson product-moment correlation coefficients were calculated, and tests of significance carried out.

CHAPTER IV

ANALYSIS OF THE DATA

This chapter presents the results of the analysis of the data related to the three phases of the study. Data from the distribution of the interest cards are analyzed according to the purpose of each phase. The findings of the three phases of the study are interpreted and discussed; the null hypotheses are accepted or rejected in accordance with the findings. Special computer programs were written for the three parts of this study by K. Bay, Division of Educational Research Services, University of Alberta.

I. HYPOTHESIS I

The first phase of the study was concerned with an investigation of the reliability of grade five pupils' responses to an instrument designed to determine their reading interests. To carry out this investigation, data were collected from the distributions resulting when the interest cards were sorted on three occasions by 391 grade five pupils. The first and second occasions were four weeks apart; the second and third occasions were two to four days apart. A value was assigned to each card in the seven piles of cards. The two reading interests that were most liked were each assigned a value of seven; the five interests that were liked next best were each assigned a value of six. The nine reading interests in the next pile each received a value of five, and the twelve in the center

each received a value of four. The next two piles of nine and five cards received values of three and two respectively, while the two interests that were least liked were each assigned a value of one. All statistical analyses were based on these values.

Pearson product-moment coefficients of correlation were calculated between the distributions resulting from each child's first and second sorts, and between the distributions resulting from his second and third sorts. Each child's two correlation coefficients were converted to Fisher's 'z' correlation coefficients and a mean was calculated for each of the two comparisons. The two mean Fisher's 'z' correlation coefficients were then transformed into corresponding Pearson product-moment correlation coefficients, thus giving an estimate of the change in children's reading interests over a long and a short term. Following is a tabular statement illustrating the final transformations:

Mean Correlations between first and second sorts		Mean Correlations between second and third sorts	
z	p.p.m.	z	p.p.m.
0.74	0.63	0.85	0.69

The mathematical transformation of Pearson product-moment correlation coefficients into Fisher's 'z' correlation coefficients results in normal sampling distribution regardless of the size of the sample or the size of the population correlation coefficient. If we drew a number of samples from a population and calculated correlation coefficients for each sample, the distribution of the

correlation coefficients would vary from sample to sample. If the correlation coefficients were arranged in a frequency distribution, this would give an experimental sampling distribution of the correlation coefficients. The larger the number of samples the closer the mean of this frequency distribution would be to population value. While a frequency distribution of the correlation coefficients from one sample could be skewed to the right or left, conversion to Fisher's 'z' correlation coefficients brings about symmetrical sampling distributions, enabling values to be interpreted in relation to a normal curve. Fisher's 'z' correlation coefficients can be subjected to mathematical computations such as being added and averaged, while Pearson product-moment correlation coefficients cannot. However, Fisher's 'z' correlation coefficients must be transformed to Pearson product-moment correlation coefficients for interpretation (Ferguson, 1966; Guilford, 1965).

Following is a discussion of the two null hypotheses tested in this phase of the study:

- A. There is no significant correlation between reading interests expressed by the same sample of pupils on two occasions four weeks apart.

The mean Pearson product-moment coefficient of correlation calculated between the pupil's responses to the instrument on two occasions four weeks apart was 0.63. A correlation of 0.13 is sufficient to be significant at the .01 level of probability so it can be seen that a coefficient of correlation of 0.63 is highly

significant (Guilford, 1965, p. 581). On the basis of this finding, the null hypothesis was rejected. This can be interpreted to mean that the reading interests of the 391 children did not change to a significant extent over the four week period.

- B. There is no significant correlation between reading interests expressed by the same sample of pupils on two occasions two to four days apart.

The mean Pearson product-moment coefficient of correlation calculated between the students' responses to the instrument on two occasions two to four days apart was 0.69. This is also highly significant, as a coefficient of correlation of 0.13 is necessary to be significant at the .01 level of probability for a sample size of 391. The null hypothesis, then, is rejected.

It is important to note that a change in the coefficients of correlation does not necessarily indicate a radical change in the children's reading interests. There were three categories that indicated some degree of "like", three that indicated some degree of "dislike", as well as one that was neutral. A reading interest that was liked the first time the cards were sorted could have been placed in another "like" category the next time the cards were sorted. A similar shifting could have taken place in the "least like" categories. Therefore, any shifting of the cards within the "like" or "dislike" categories would mean a change in the coefficient of correlation, without necessarily meaning a basic change in a child's reading interests.

The correlation coefficients of 0.63 over a long term and 0.69 over a short term would appear to indicate that the length of time between tests of reading interests is not as important as what has happened in the time between the testing situations. There are many activities that occupy the time of the child both in and out of school. School activities that could influence a child's reading interests are: the introduction of a new unit of study in any subject area, a new or different book being read to the class, a visit to the school library, the visit of a resource person, a field trip, educational television, radio programs, filmstrips or other audio-visual aids. Activities, events, or other things associated with the home that may influence a child's reading interests are: television or radio programs, movies, reading, a visit to a library or shopping center, trips, games or hobbies. Also, recommendations of reading material given by peers are highly regarded at the upper elementary level.

As there is no research similar to this investigation, there are no results that could act as a point of reference. Norvell (1958) was trying to decide whether grade three children were too young to respond successfully to his questionnaire when he conducted his investigation into the reliability of results. Two groups of children numbering 384 and 388 responded to his questionnaire. Fifty selections were read to the child, with no comments and no discussion until after reports were handed in. The children rated the selections

as "very interesting", "fairly interesting" or "uninteresting." Interest scores were computed according to a formula. A Pearson product-moment coefficient of correlation calculated between the fifty pairs of scores was $0.951 \pm .009$. This comparatively high correlation could possibly be attributed to Norvell's use of poetry selections, and also to the fact that he used only three categories of "like" or "dislike" compared with seven categories used in this study. The only similarity between the two studies seems to be in the number of children in the samples. Of interest is Norvell's observation that approximately 400 pupil reports should be used in an investigation of reading interests to ensure reliability of results.

In summary, the Pearson product-moment coefficients of correlation calculated between 391 children's responses to an instrument designed to investigate their reading interests were 0.63 over a long term and 0.69 over a short term. As these correlations were both significant at the .01 level, the null hypotheses were rejected. The finding was interpreted to mean that children's reading interests do not change to a significant extent over a period of a few days or over a period of four weeks. The closeness of the coefficients of correlation (0.63 and 0.69) appear to indicate that the time between responses to the instrument was not as significant as the factors that influenced children's reading interests during that time.

II. HYPOTHESIS II

In order to conduct a survey of the expressed reading interests of grade five boys and girls, a frequency distribution of their reading interests was used to establish the items most liked and least liked by boys and by girls. The scores were cumulative over the three occasions the cards were sorted. Thus, each of the forty-four items had a chance to be placed in the "most-like" category three times by each of the 391 children.

If we look first at the 189 boys' choices (Table I), the greatest number of times each reading interest could be placed in a category was 3 times 189, or 567. A similar breakdown for the girls (Table II) indicates that each interest could be placed in any category a total of 3 times 202, or 606 times. Following is a description of the items listed in Tables I and II:

1. A story in which animals talk to each other.
2. A story that includes wild animals and people.
3. A story about animals as pets of boys and girls.
4. A story about school life, in which girls are the main characters.
5. A story about school life, in which boys are the main characters.
6. A story about boys taking part in outdoor sports such as hockey, baseball, skiing, football.
7. A story about girls taking part in outdoor sports such as softball, swimming, tobogganing.
8. A story about the life of a famous woman.
9. A story about the life of a famous man.
10. The classic or old fairy tales such as Snow White, The Ugly Duckling, Cinderella.
11. Modern fairy tales and folk tales such as those from Africa, Ireland or Canada.
12. Legends or tall tales that tell about the adventures of a hero.
13. Humorous or funny tales from many lands.

TABLE I
BOYS' FREQUENCY COUNT ON ITEMS

Item	Least Liked 1	2	3	Value 4	5	6	Most Liked 7
1	41	60	109	203	101	44	9
2	8	30	94	202	160	53	20
3	14	54	155	211	97	31	5
4	13	53	129	234	120	17	1
5	62	156	154	161	18	8	8
6	6	28	59	142	178	86	68
7	39	159	149	162	34	20	4
8	6	37	56	140	213	87	28
9	27	120	137	168	84	25	6
10	65	141	159	142	49	11	0
11	8	65	154	236	95	9	0
12	3	28	69	145	235	80	7
13	6	39	110	201	173	34	4
14	4	36	101	201	190	30	5
15	3	59	165	209	114	15	2
16	5	107	244	178	28	5	0
17	7	80	252	195	28	4	1
18	5	12	26	51	143	216	114
19	1	11	12	35	122	247	139
20	5	38	121	184	169	46	4
21	2	9	28	92	237	182	17
22	3	18	28	58	109	185	166
23	7	35	84	120	173	129	19
24	135	102	119	89	69	42	11
25	20	73	143	172	124	35	0
26	12	75	240	197	39	4	0
27	23	102	196	166	48	24	8
28	24	29	27	40	100	197	150
29	15	124	238	158	21	9	2
30	33	147	209	145	21	12	0
31	23	68	114	135	109	108	10
32	3	45	126	188	148	50	7
33	1	61	91	159	188	56	11
34	19	87	131	192	101	31	6
35	8	68	107	202	143	36	3
36	12	48	96	163	163	75	10
37	12	56	111	172	129	66	21
38	343	24	36	41	28	51	44
39	8	33	66	161	198	73	28
40	58	184	154	129	31	8	3
41	8	27	58	168	167	77	62
42	19	71	115	209	94	41	18
43	9	11	25	68	124	239	91
44	7	25	82	199	190	50	14

TABLE II
GIRLS' FREQUENCY COUNT ON ITEMS

Item	Least Liked	Value					Most Liked
	1	2	3	4	5	6	7
1	17	33	97	164	156	110	29
2	7	36	116	188	157	79	23
3	5	32	114	198	169	69	19
4	35	103	186	200	47	30	5
5	11	40	114	213	148	63	17
6	31	134	185	199	34	20	3
7	5	45	113	203	155	64	21
8	18	95	158	201	72	54	8
9	12	47	105	163	160	86	33
10	32	83	122	166	136	53	14
11	4	68	155	220	132	24	3
12	4	72	152	198	142	33	5
13	2	21	70	188	249	67	9
14	2	38	121	183	209	49	4
15	2	59	158	196	134	48	9
16	8	91	224	193	73	17	0
17	8	75	234	239	42	8	0
18	66	122	136	112	74	71	25
19	2	17	23	37	90	149	288
20	5	51	121	193	171	63	2
21	1	16	43	95	240	168	43
22	38	77	98	93	109	121	70
23	46	142	155	131	75	40	17
24	97	129	109	113	70	62	26
25	13	63	124	162	155	71	18
26	10	68	208	212	85	20	3
27	13	71	141	152	109	96	24
28	331	74	69	52	35	36	9
29	9	114	192	200	68	21	2
30	5	71	157	182	115	52	24
31	9	53	76	103	170	147	48
32	3	32	85	151	239	84	12
33	1	29	65	131	225	123	32
34	24	119	165	206	55	27	10
35	5	55	137	193	144	69	3
36	5	42	60	143	187	141	28
37	87	198	156	141	18	4	2
38	217	55	55	76	64	109	120
39	34	119	189	181	53	25	5
40	8	46	105	213	168	54	12
41	13	43	97	171	119	95	68
42	11	38	102	198	124	94	39
43	39	57	79	102	99	166	64
44	9	31	95	231	178	52	10

14. Stories about imaginary people who were supposed to have lived long ago.
15. Stories about how boys and girls really lived long ago.
16. Stories about how boys and girls live now, their home life and activities.
17. A book about children travelling in our land or other lands.
18. Stories about space travel.
19. Mystery stories.
20. Adventure stories that are lively, but not dangerous.
21. Adventure stories about dangerous and exciting happenings.
22. Science fiction.
23. Westerns, cowboy stories, or life in the early west.
24. Religious stories.
25. Stories that teach a lesson.
26. Stories about children from other lands.
27. Stories about careers, such as being a doctor or a nurse.
28. War stories.
29. Stories about how boys and girls celebrate holidays such as Christmas or Thanksgiving.
30. Stories of home life with babies or young children as the main characters.
31. Stories of witches and ghosts.
32. Funny stories about everyday life.
33. Funny stories about things that couldn't possibly happen.
34. Stories about patriotism, that is, being loyal to your country.
35. Stories about the courage and bravery of boys and girls.
36. Stories of magic and magical happenings.
37. Stories in which mechanical things, such as cars, airplanes, or boats are the main characters.
38. Stories about romantic love.
39. A story about boys taking part in outdoor activities such as camping, hiking, boating.
40. A story about girls taking part in outdoor activities such as camping, picnicking, hiking.
41. A story just about wild animals.
42. A story just about tame animals.
43. Detective stories.
44. A story about something that really happened.

Reading Interests of Boys

Table III presents a list of the reading interests most liked by boys in order of preference. Boys indicated they were most interested in reading science fiction (item 22), with war stories (28) and mystery

TABLE III
FREQUENCY COUNT OF ITEMS MOST LIKED BY BOYS

Item No.	Description of Item	Frequency Count
22	Science fiction	166 ^a
28	War stories	150
19	Mystery stories	139
18	Space travel	114
43	Detective stories	91
6	Boys taking part in outdoor sports	68
41	A story just about wild animals	62

^aPossible = 567.

TABLE IV
COMBINED FREQUENCY COUNT OVER TWO TOP CATEGORIES
OF ITEMS MOST LIKED BY BOYS

Item No.	Description of Items	Frequency Count
19	Mystery stories	386 ^a
22	Science fiction	351
28	War stories	347
18	Space travel	330
43	Detective stories	330
6	Boys taking part in outdoor sports	154
41	A story just about wild animals	139

^aPossible = 567.

stories (19) close second and third choices. Space travel (18) was boys' fourth choice, followed by detective stories (43), boys taking part in outdoor sports (6), and a story just about wild animals (41).

Children taking part in this investigation indicated that they recognized a difference between mystery stories and detective stories. A detective story often involved a mystery of some kind, but was usually associated with the solving of a problem related to a crime. Mystery stories were often concerned with strange, sometimes supernatural beings or happenings, such as ghosts, haunted houses or mysterious disappearances.

It is interesting to note the number of choices the items received in the category that received a value of six. After each boy withdrew the two reading interests that he liked most, he chose five that he liked next best. The frequency count for these choices is found under category 6 in Table I. The item that was placed most frequently in this category was mystery stories (19) with 247 choices. In second place was detective stories (43), followed by space travel (18), war stories (28), science fiction (22), adventure stories about dangerous and exciting happenings (21), westerns (23), and stories of witches and ghosts (31). Any interests that rated high in this category could be considered to be of considerable interest to boys, even though adventure stories, westerns, witches and ghosts did not rate high in the "most like" category. The fact that mysteries, war stories, space travel, and science fiction rated high in the top two

categories would be an indication that most boys find them of great interest.

A combined total of choices in the top two categories is listed in Table IV on page 79. Mystery stories received the largest number of choices, probably indicating that they were highly regarded by a greater number of boys than any other reading interest, even though they received only the third highest number of "most like" choices. Following mystery stories, in order of choice were science fiction, war stories, space travel, detective stories, boys taking part in outdoor sports, and a story just about wild animals. Note that, except for mystery stories, the order of choice for the top two categories combined is the same as that for the "most like" category.

The choices of the top three categories are combined and listed in Table V. If we consider, as Kerlinger does, that the middle pile of cards in a Q sort contains items about which the sorter feels neutral or can't make up his mind, then any reading interests about which the child has any positive feelings should be in the categories that received values of five, six, and seven. A combination of these categories tells us that mystery stories (19) were placed 508 of 567 possible times in the three categories that indicate some degree of interest. Space travel (18) was in second place followed by science fiction (22), detective stories (43), war stories (28), adventure stories of dangerous and exciting happenings (21), and stories of boys taking part in outdoor sports (6).

TABLE V
COMBINED FREQUENCY COUNT OVER THREE TOP CATEGORIES
OF ITEMS MOST LIKED BY BOYS

Item No.	Description of Item	Frequency Count
19	Mystery stories	508 ^a
18	Space travel	473
22	Science fiction	460
43	Detective stories	454
28	War stories	447
21	Adventure stories about dangerous and exciting happenings	436
6	Boys taking part in outdoor sports	332

^aPossible = 567.

TABLE VI
FREQUENCY COUNT OF ITEMS LEAST LIKED BY BOYS

Item No.	Description of Item	Frequency Count
38	Stories of romantic love	343 ^a
24	Religious stories	135
10	Classic or old fairy tales	65
5	A story about school life in which boys are main characters	62
40	A story about girls taking part in outdoor activities	58
1	Talking animal stories	41

^aPossible = 567.

Boys have placed stories about romantic love (38) in the "least like" category a total of 343 times (Table VI). This was the highest frequency in any category by the boys or by the girls. Stories about romantic love (38) were placed last two and one-half times as often as religious stories (24), which received 135 "least like" choices. Classic or old fairy tales (10) placed third in the "least like" category with 65 choices. The fourth place choice, school stories with boys as main characters, was interesting as the investigator anticipated that school stories with girls as main characters would be more disliked. In fact, school stories about girls received only thirteen "least like" choices, and was placed most often in the middle, that is, neutral category. Of the remaining two least liked interests mentioned in Table VI, one does have girls as main characters. This was a story about girls taking part in outdoor activities (40) followed by talking animal stories (1).

In summary, today's grade five boys have indicated that their main interest in reading is science fiction, followed by war stories, mysteries, space travel, detective stories, stories of boys taking part in outdoor sports, and stories about wild animals. It appears that boys who like to read science fiction have a very strong interest in it, as it does not hold first position when the other top categories are considered. Stories of mystery, which are placed third when only the "most like" category is considered, are at the top of the list when other categories that show some degree of interest are included.

This would appear to indicate that mystery stories are liked to some degree by more boys than any other reading interest in fiction, even though they are not "most liked" by a majority of the boys. A great many boys have also indicated some interest in space travel, although it is in fourth place when you consider only the most-liked interests. Generally, boys show most interest in fiction that contains a great amount of excitement, adventure, and action. Ten year old boys have expressed a very strong dislike for stories of romantic love, with religious stories the second most-disliked reading interest. They also dislike fairy tales, school stories, and stories with girls as main characters. Throughout the years boys of this age have expressed much the same dislikes in reading, but the great interest shown by modern boys in science fiction and space travel is peculiar to the present time.

Reading Interests of Girls

Table VII presents the fiction most liked by grade five girls. It is noted that mystery stories (19) received over twice as many first choices as the next item, which was stories about romantic love (38). The girls were very definite in their choices of these first two items, as they received a large majority of the choices. Science fiction (22), wild animal stories (41), and detective stories (43) were separated from each other by only a few choices, but were far below the top two. Stories of witches and ghosts (31) and adventure stories about dangerous and exciting happenings (21), the last items indicated on the table, received only one-seventh the number of first choices as mystery stories (19) did.

TABLE VII
FREQUENCY COUNT OF ITEMS MOST LIKED BY GIRLS

Item No.	Description of Item	Frequency Count
19	Mystery stories	288 ^a
38	Stories about romantic love	120
22	Science fiction	70
41	A story just about wild animals	68
43	Detective stories	64
31	Stories of witches and ghosts	48
21	Adventure stories about dangerous and exciting happenings	43

^aPossible = 606.

TABLE VIII
COMBINED FREQUENCY COUNT OVER TWO TOP CATEGORIES
OF ITEMS MOST LIKED BY GIRLS

Item No.	Description of Item	Frequency Count
19	Mystery stories	437 ^a
43	Detective stories	230
38	Stories about romantic love	229
21	Adventure stories about dangerous and exciting happenings	211
31	Stories of witches and ghosts	195
22	Science fiction	191
36	Stories of magic and magical happenings	169

^aPossible = 606.

Table VIII presents a combination of the two top categories, that is, the ones receiving values of seven and six respectively. Any items that received a large number of choices in these two categories would be very highly regarded by the girls. Mystery stories (19) were still favored by twice as many girls as their nearest rival, and so retain top position. Detective stories (43) are now in second position, indicating that they are well liked by a great many girls, even though this item is not considered their top favorite. The same is true of adventure stories about dangerous and exciting happenings (21). This item received the greatest number of second choices (Table II, item 21), and moved up from seventh to fourth position. Stories of romantic love (38), science fiction (22), and stories of wild animals (41) appear to cause quite definite feelings of like or dislike in the girls, as they all lose favor when the second choice category is considered. Stories of the supernatural appear to be well liked by ten year old girls as evidenced by the appearance on Table VIII of stories of witches and ghost (31), and stories of magic and magical happenings (36).

All stories that girls have indicated any degree of interest in, that is, the top three categories, are combined in Table IX. Mystery stories (19) are still in first position, probably indicating that they are not only well liked by most grade five girls, but that they are also the girls' favorite reading interest in fiction. Adventure stories (21) have moved up to second place, indicating that

TABLE IX
COMBINED FREQUENCY COUNT OVER THREE TOP CATEGORIES
OF ITEMS MOST LIKED BY GIRLS

Item No.	Description of Item	Frequency Count
19	Mystery stories	527 ^a
21	Adventure stories about dangerous and exciting happenings	451
31	Stories of witches and ghosts	365
36	Stories of magic and magical happenings	356
43	Detective stories	329
22	Science fiction	300
38	Stories of romantic love	293

^aPossible = 606.

TABLE X
FREQUENCY COUNT OF ITEMS LEAST LIKED BY GIRLS

Item No.	Description of Item	Frequency Count
28	War stories	331 ^a
38	Stories about romantic love	127
24	Religious stories	97
37	Stories in which mechanical things are main characters	87
18	Stories about space travel	66
23	Westerns	46
43	Detective stories	39

^aPossible = 606.

most girls show considerable interest in these stories but do not count them as their favorite reading. Stories of the supernatural (31,36) have showed another gain, indicating a general interest in this area. Science fiction (22) and romantic love (38) again appear to be strong interests of a particular group of girls rather than general interests of many girls.

That girls dislike violence and bloodshed is evidenced by the 331 "least like" choices that war stories (28) received, over twice as many as the next item (Table X). It is very interesting to note that stories of romantic love (38) appear in second place on both Table VII and Table X. That puts this item in the unusual position of being second "most liked" and also second "least liked" reading interest. An explanation can be seen in Table II, item 38, where it is evident that stories of romantic love are either very strongly liked or very strongly disliked by a majority of the girls. Girls indicate a dislike for religious stories and stories in which mechanical things are the main characters. Of interest is the fact that girls dislike stories of space travel, but like science fiction. Girls also indicate they are not fond of westerns, perhaps because of their dislike for violence and bloodshed.

In summary, girls have disclosed that their first choice in reading is mystery stories. This item is liked generally by most girls, and is also the favorite of a majority of them. Stories of romantic love, wild animal stories and science fiction are found by

many girls to be most interesting, but are not of great general interest, as detective stories are. Grade five girls are generally fond of stories of the supernatural, such as witches, ghosts, magic and magical happenings. Although girls indicate that they are interested in stories of adventure with dangerous and exciting happenings, their interest does not extend to violence and bloodshed, as evidenced by their dislike for war stories and westerns. Paradoxically, stories of romantic love are strongly disliked by many girls and strongly liked by others. Religious stories do not find favor with grade five girls, nor do stories of mechanical things. Girls evidence little interest in stories of space travel, even though many have indicated a strong liking for science fiction.

Summary of Reading Interests of Boys and Girls

Tables XI and XII present summaries of the reading interests of boys and girls under the headings of "Like", "Dislike", and "Neutral". The information in the tables was arrived at after examination of the data found in Tables I and II. The investigator found that it was much more difficult to compile the information on girls' reading interests than on boys' reading interests. Since boys as a group generally made a clear cut distinction between what they liked, disliked, or felt neutral about, it was not difficult to make decisions about most of the items. On the other hand, girls' choices for some items were distributed so evenly over categories that it was difficult to tell how girls, generally, viewed these items. As a

TABLE XI

SUMMARY OF READING INTERESTS OF BOYS

Like	Dislike	Neutral
Science fiction War stories Mystery stories Stories about space travel Detective stories A story about boys taking part in outdoor sports A story just about wild animals Adventure stories about dangerous and exciting happenings A story that includes wild animals and people A story about the life of a famous woman Legends or tall tales that tell about the adventures of hero Westerns, cowboy stories, or life in the early west Stories in which mechanical things, such as cars, airplanes, or boats are the main characters A story about boys taking part in outdoor activities such as camping, boating, hiking A story about something that really happened	Stories of romantic love Religious stories Classic or old fairy tales A story about school life in which boys are the main characters A story about girls taking part in outdoor activities such as camping, picnicking, hiking A story about girls taking part in outdoor sports Stories of home life with babies or young children as main characters A story in which animals talk to each other A story about animals as pets of boys and girls A story about school life in which girls are the main characters A story about the life of a famous man Religious stories Stories that teach a lesson Stories about careers, such as being a doctor or nurse Stories about how boys and girls celebrate holidays, such as Christmas, Thanksgiving Stories of witches and ghosts Stories about patriotism	Stories about children from other lands Modern fairy tales and folk tales Humorous or funny tales from many lands Stories about imaginary people who were supposed to have lived long ago Stories about how boys and girls really lived long ago Stories about how boys and girls live now, their home life and activities A book about children travelling in our land or other lands Adventure stories that are lively but not dangerous Stories about children from other lands Funny stories about everyday life Stories about the courage and bravery of boys and girls Stories of magic and magical happenings A story just about tame animals

TABLE XII

SUMMARY OF READING INTERESTS OF GIRLS

Like	Dislike	Neutral
Mystery stories Stories of romantic love Science fiction A story just about wild animals Detective stories Stories of witches and ghosts Stories of magic and magical happenings Adventure stories about dangerous and exciting happenings A story in which animals talk to each other A story just about tame animals A story that includes wild animals and people A story about the life of a famous man Funny stories about things that couldn't possibly happen A story about animals as pets of boys and girls A story about girls taking part in outdoor sports	War stories Religious stories Stories in which mechanical things are main characters Stories about space travel Westerns, cowboy stories, or life in the early west A story about school life, in which girls are the main characters A story about boys taking part in outdoor sports Stories of romantic love Stories about patriotism A story about boys taking part in outdoor activities, such as camping, hiking, boating The classic or old fairy tales Stories about children travelling in our land or other lands Stories about how boys and girls live now Stories about how boys and girls celebrate holidays, such as Christmas, Thanksgiving, etc. A story about the life of a famous woman	A story about school life in which boys are the main characters Modern fairy tales and folk tales Legends or tall tales Humorous or funny tales from many lands Stories about imaginary people who were supposed to have lived long ago Stories about how boys and girls really lived long ago Adventure stories that are lively but not dangerous Stories that teach a lesson Stories about careers such as being a doctor or a nurse Stories of home life with babies or young children as main characters Funny stories about everyday life Stories about the courage and bravery of boys and girls A story about girls taking part in outdoor activities A story about something that really happened

result, arbitrary decisions had to be made about the placement of some items. This observation would appear to agree with the observations of teachers participating in this study. The teachers remarked that it was easier for them to predict the reading interests of their male pupils than their female pupils because the boys had more definite, clear cut reading interests. It was more difficult to predict reading interests for their female pupils because the girls read so widely. In this regard Peltola (1966) reported that girls from grades four to six did not drop reading interests to adopt new ones; rather, they added new reading interests to their former ones. This could result in a broad range of reading interests for girls.

Boys and girls have a few common reading interests, of which the most notable are mystery stories, science fiction, detective stories, wild animal stories, and adventure stories about dangerous and exciting happenings. Both boys and girls indicate a liking for biography, with boys preferring stories about famous women and girls preferring stories about famous men. The investigator can find no explanation for this as other items placed by boys in the "Like" category indicate that they like to read stories in which boys are main characters, while girls indicate they like to read about other girls.

It is noticeable that the reading interests that boys and girls have in common are found in stories that have a high level of excitement, action, and suspense. The rest of the boys' expressed

likes continue in this vein and include, in order of preference, war stories, westerns, hero tales, sports stories, stories of mechanical things, outdoor activities, and historical fiction. The rest of the girls' expressed likes are of a tamer nature, and include the very popular stories of romantic love, further categories of animal stories, stories of the supernatural, and humorous tales.

Boys and girls agree that they dislike religious stories, stories of patriotism, stories about school life, most stories about the opposite sex, and stories about how children celebrate special holidays. The rest of the boys' dislikes include stories of romantic love, stories of home and school life, animal stories other than those about wild animals, travel stories, stories about careers, and stories with morals. It would appear that these items do not present enough action and excitement to suit the boys. The rest of the girls' dislikes include war stories, westerns, space travel, stories about mechanical things, travel stories, and stories about children from other lands.

III. HYPOTHESIS III

The third purpose of the study was to determine the extent of agreement between the responses of particular grade five pupils to an instrument designed to determine their reading interests, and the responses their teachers made in an attempt to predict the reading interests of their pupils. Twenty-four male pupils, twenty-four female

pupils, four male teachers and four female teachers were involved in the third phase of the research. The first time the pupils sorted the cards, the teacher sorted them for three male and three female pupils randomly selected by the investigator from among the superior pupils in the classroom. Only the first sorts of the pupils were used in this part of the study.

Pearson product-moment coefficients of correlation were calculated between the distributions of the cards as they were sorted by each of the forty-eight pupils and by their teachers. These were transformed to Fisher's 'z' coefficients of correlation for the reasons discussed under Hypothesis I. In Table XIII are itemized the Fisher's 'z' coefficients of correlation calculated between each teacher's distribution of cards and that of his male and female pupils, and the cell means. Table XIV summarizes the mean Fisher's 'z' coefficients of correlation for male and female teachers and male and female students. Means for all teachers and all students are also given.

A three-way analysis of variance was carried out, with Tables XV, XVI, and XVII reporting the analysis which was used to test Hypothesis III. The sources of variation are:

- A: sex of teacher, male or female
- B(A): individual teacher nested within sex of teacher
- C: sex of pupil, male or female
- AC: interaction of sex of teacher and sex of pupil
- B(A)xC: interaction of individual teachers, within male and female groups, with sex of pupil
- Cell (Table XV): the individual teacher with three male or three female pupils
- Pool (Table XV): pooled error from three sources - cell, B(A) and B(A)xC.

TABLE XIII
PREDICTIONS OF EIGHT TEACHERS

		Male Teachers				Female Teachers			
	1	2	3	4	5	6	7	8	
Male Pupils									
1	0.9147 ^a	0.3911	0.5352	0.5635	0.4287	0.6865	0.7375	0.5076	
2	0.7553	0.3667	0.3945	0.5493	0.2955	0.3913	0.2385	0.5928	
3	0.6737	0.0320	0.7735	0.6230	0.2543	0.5932	0.8715	0.2611	
Cell Means	0.7812	0.2633	0.5677	0.5786	0.3262	0.5570	0.6158	0.4538	
Female Pupils									
1	0.2452	0.1803	0.3072	0.2840	-0.0424	0.3546	0.4941	0.1609	
2	0.1277	0.1939	0.3189	0.3983	-0.1284	0.2170	0.1939	0.2272	
3	0.2149	0.2955	0.2333	0.4083	0.0960	0.6078	0.1719	0.5636	
Cell Means	0.1959	0.2232	0.2865	0.3620	0.0889	0.3931	0.2866	0.3172	

^aFisher's 'z' coefficients of correlation.

TABLE XIV
MEAN PREDICTIONS BY MALE AND FEMALE TEACHERS
FOR MALE AND FEMALE PUPILS AND ALL PUPILS

Pupils	Teachers		
	Male (N=4)	Female (N=4)	All Teachers (N=8)
Male (N=24)	0.5477 ^a	0.4882	0.5179
Female (N=24)	0.2669	0.2715	0.2692
All Pupils (N=48)	0.4073	0.3798	0.3936

^aFisher's 'z' coefficient of correlation.

TABLE XV
ANALYSIS OF VARIANCE

Source of Variation	ss	df	MS
A ^a	0.009	1	0.009
B (A)	0.491	6	0.082
C	0.743	1	0.743
AC	0.012	1	0.012
B (A) x C	0.266	6	0.044
Cell	1.557	32	0.048
Pool	1.556	44	0.035

^aA = Sex of teacher M or F.

B = Teacher 1-4, 5-8 (Individual teacher nested within sex of teacher).

C = Sex of pupil M or F.

TABLE XVI
INITIAL TEST USING CELL MS AS ERROR TERM

Source of Variation	df ₁	df ₂	F Ratio	Probability
B (A) ^a	6	32	3.296	0.013 [*]
B (A) x C	6	32	1.770	0.137

^aA = Sex of teacher M or F.

B = Teacher 1-4, 5-8 (Individual teacher nested within sex of teacher).

C = Sex of pupil M or F.

^{*}Significant at .05 level.

TABLE XVII
TEST BY POOLED ERROR MS^a

Source of Variation	df ₁	df ₂	F Ratio
A ^b	1	38	0.187
C	1	38	15.479 ^{**}
AC	1	38	0.250

^aPooled Error MS = Cell + B(A) x C (Table XV).

^bA = Sex of teacher M or F.

C = Sex of pupil M or F.

^{**}Significant at .01 level.

Due to the small number of teachers involved in this phase of the study, an attempt was made to pool the error from three sources to allow forty-four degrees of freedom. The legitimacy of this pooling was tested; the results are seen in Table XVI. A test of B(A) and cell sources of variation shows a significant difference at the .05 level of probability; therefore, it is not legitimate to pool the error from these two sources, as they are too different. A test of B(A)xC and cell sources of variation indicates that there is no significant difference between the two; therefore, it is legitimate to pool them, giving thirty-eight degrees of freedom. Final tests using the pooled error from the two sources, B(A)xC and cell, are seen in Table XVII.

Following is an interpretation of the tables in relation to the three null hypotheses that form Hypothesis III.

- A. There is no significant difference between male and female teachers in their ability to predict reading interests of pupils.

In order to be significant at the .05 level of probability, the F ratio for sex-of-teacher factor would have to be 4.10. In Table XVII, it can be seen that the F ratio for A, that is, sex of teacher, is 0.187 and therefore the null hypothesis is upheld. The conclusion can be drawn that male and female teachers differ little in the extent to which they know the reading interests of the pupils in their classrooms.

It can be observed in Table XIV that the mean Fisher's 'z' coefficient of correlation calculated between male teachers'

distributions of the interest cards and that of their pupils is 0.4073; that calculated between female teachers' distributions of the cards and that of their pupils is 0.38798. This is an indication that there is little difference between male and female teachers in the extent to which they know the reading interests of their pupils.

- B. There is no significant difference between male and female teachers in their ability to predict reading interests of male pupils and in their ability to predict reading interests of female pupils.

The factor of the interaction between sex of teacher and sex of pupil is indicated by "AC" in Table XVII. The F ratio of 0.250 indicates no significant difference, as the F ratio needed to be significant at the .05 level of probability is 4.10. Therefore, the null hypothesis is upheld. This can be interpreted to mean that male and female teachers differ little in the extent to which they know the reading interests of their male pupils, and also that male and female teachers differ little in the extent to which they know the reading interests of their female pupils. Further evidence of this can be seen in Table XIV. Mean Fisher's 'z' coefficients of correlation calculated between male pupils' distributions of interest cards and that of their male and of their female teachers are 0.5477 and 0.4882 respectively. It can be seen that there is little difference between male and female teachers in their ability to predict reading interests of their male pupils. Mean Fisher's 'z' coefficients of correlation calculated between female pupils' distributions of the interest cards and that of their male and of their female teachers are

0.2669 and 0.2715. Again, there is little difference, and the conclusion can be drawn that male and female teachers differ little in their ability to predict the reading interests of their female pupils.

- C. There is no significant difference between teachers in their ability to predict reading interests of male pupils, and in their ability to predict reading interests of female pupils.

It can be seen in Table XVII that sex of pupil (c) is a highly significant factor in the ability of teachers to predict reading interests of their pupils. An F ratio of 7.35 was needed in order for sex of pupil to be significant at the .01 level of probability. The F ratio calculated was 15.479, which is highly significant. Therefore, the null hypothesis was rejected.

Examination of Table XIII reveals that, although there are individual differences among the teachers, each teacher knew the reading interests of male pupils better than he/she knew the reading interests of female pupils. Further evidence is seen in Table XIV. The mean Fisher's 'z' coefficient of correlation calculated between all teachers and their male pupils is 0.5179, while that calculated between all teachers and their female pupils is 0.2692. The findings reveal that the teachers who took part in this study knew the reading interests of their male pupils much better than they knew the reading interests of their female pupils.

Of interest is the grand mean Fisher's 'z' coefficient of correlation of 0.3936 calculated between the distributions of the interest cards as sorted by all teachers for all pupils, and the

distributions of the cards as sorted by all pupils (Table XIV). This can be transformed to a Pearson product-moment coefficient of correlation of 0.37. The coefficient of correlation necessary to be significant at the .05 level is 0.36 (Guilford, p. 581), therefore, 0.37 is a significant correlation. This reveals that the teachers involved in this study knew the reading interests of their pupils to a significant extent. These results can be compared with the results of Norvell's study. Norvell (1958) asked teachers to classify 107 poems as being "very interesting", "fairly interesting", or "uninteresting" to boys and to girls. He compared the teachers' opinions with the classification of the same poems by children, and found that teachers' opinions provided no better placement of poems than would allocation by chance.

To summarize, there was no significant difference found between the four male and four female teachers in the extent to which they knew the reading interests of their pupils. It appears that male teachers knew the reading interests of their students as well as did the female teachers. Nor was there any significant difference found in the extent to which male and female teachers knew the reading interests of their male students, or in the extent to which they knew the reading interests of their female students. It is evident that sex of teacher makes little difference in the teacher's ability to predict reading interests of male students. Similarly, sex of teacher is not a significant factor in the teacher's ability to predict

reading interests of female pupils. Sex of pupil is a highly significant factor, as the evidence points out that both male and female teachers knew the reading interests of their male pupils much better than they knew the reading interests of their female pupils. Some of the teachers were aware of this, as they made comments to this effect at the time they sorted the cards for their pupils. They volunteered the reason that the boys' reading interests were more definite and clear cut whereas girls read more widely and had more varied interests. It was found that the eight teachers, generally, knew the reading interests of their pupils to a significant extent.

IV. SUMMARY

This chapter has presented the results of the analysis of data for the three phases of the study. The hypothesis related to each phase was tested and the findings were interpreted. To test the reliability of the Q Sort responses, Pearson product-moment coefficients of correlation were calculated. A frequency distribution was used to determine the reading interests that were most liked and least liked by boys and by girls. To test the hypothesis for phase three of the study, an analysis of variance was carried out. The difference between teachers in their ability to predict reading interests of male pupils and in their ability to predict reading interests of female pupils was found to be significant at the .01 level.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

I. SUMMARY

Purpose

This study was undertaken for three purposes. The first purpose was to investigate the reliability of pupils' responses over a long and a short term to an instrument designed to determine their reading interests. The second purpose of the study was to survey the reading interests of grade five boys and girls. The purpose of the third phase of the study was to determine the extent of agreement between responses to the instrument made by particular grade five pupils and the responses made by their teachers in an attempt to predict the reading interests of each pupil.

Design

Three hundred ninety-one grade five pupils, classified as average and superior, from seventeen elementary schools took part in this study. Since each school had a central library, all children had approximately equal access to books. The pupils sorted forty-four reading interest cards on three occasions. The first and second occasions were four weeks apart; the second and third occasions were two to four days apart. The instrument, called a Q Sort, was designed by the investigator. On each of the forty-four cards was printed a reading interest the children might or might not like to

select. On each occasion the children sorted the cards into seven piles according to a predetermined distribution. A value was assigned to each of the seven categories and all statistical analyses were based on these values. Standardized instruction was given by the investigator to each class on each occasion that the cards were sorted.

To investigate the third phase of the study a subsample consisting of forty-eight children classified as superior, and their eight teachers, was used. Half of the pupils and half of the teachers were male; half were female. Superior students were used because they present a homogeneous group with many and varied reading interests. Each teacher sorted the cards once for each of the three boys and girls from his/her classroom in an attempt to predict the reading interests of those children. This phase of the study utilized the distribution of the cards as sorted on the first occasion by the forty-eight children.

Data retrieved from the distribution of the cards were subjected to statistical treatment according to the purpose of each phase of the study. To investigate phase one, a mean coefficient of correlation was calculated between the children's first and second distributions of the cards, and between their second and third distributions of the cards. Phase two of the study utilized a frequency distribution of the expressed reading interests of the boys and of the girls, cumulative over the three times the cards were sorted.

To investigate phase three, coefficients of correlation were calculated between the first distributions of the cards as sorted by the forty-eight children, and the distributions of the cards as sorted by their eight teachers. Means were calculated and an analysis of variance carried out.

Findings

Hypothesis I. There were two questions related to Hypothesis I. In order to investigate these problems, two null hypotheses were tested with the following results. The first hypothesized no significant correlation between pupils' responses to the instrument on two occasions four weeks apart. The mean Pearson product-moment coefficient of correlation of 0.63 was highly significant, therefore the null hypothesis was rejected. The second hypothesized no significant correlation between pupils' responses to the instrument on two occasions two to four days apart. The correlation of 0.69 was also highly significant, therefore this null hypothesis was rejected. The interpretation was that children's reading interests do not change to a significant extent over a period of two to four days or over a period of four weeks. It would appear that the time between responses to the instrument was not as significant as other factors that influenced the children during the periods of time.

Hypothesis II. A frequency distribution of the reading interests of boys and of girls revealed the following information. Grade five boys' reading interests, in order of preference, are science fiction, war stories, mystery stories, space travel, detective stories, stories of boys taking part in outdoor sports, and wild animal stories. Grade five boys, generally, have expressed disinterest in reading stories of romantic love, religious stories, fairy tales, school stories, and stories with girls as main characters.

Grade five girls expressed a liking for mystery stories, stories of romantic love, science fiction, wild animal stories, stories of witches and ghosts, and adventure stories about dangerous and exciting happenings. Girls' strongest dislike is for war stories, followed by stories of romantic love, religious stories, and stories in which mechanical things are main characters.

Boys and girls at this age and grade share an interest in mystery stories, science fiction, detective stories, wild animal stories, and adventure stories about dangerous and exciting things. Both boys and girls have expressed disinterest in religious stories, stories of patriotism, stories about school life, most stories about the opposite sex, and stories about how children celebrate special holidays.

Hypothesis III. Phase three of the study investigated three questions. Three related null hypotheses were tested. Two were upheld; one was rejected.

The first hypothesized no significant difference between male and female teachers in their ability to predict reading interests of pupils. The null hypothesis was upheld, indicating that male teachers know the reading interests of their pupils as well as do the female teachers.

There was no significant difference found between male and female teachers in their ability to predict the reading interests of their male pupils, nor in their ability to predict the reading interests of their female pupils. Therefore, the null hypothesis was upheld. This can be interpreted to mean that male and female teachers differ little in the extent to which they know the reading interests of their male pupils, and in the extent to which they know the reading interests of their female pupils.

A highly significant difference was found between the teachers' ability to predict reading interests for their male pupils, and the teachers' ability to predict reading interests for their female pupils. The null hypothesis, then, was rejected. Further examination of the data revealed that the teachers, generally, knew the reading interests of their male pupils much better than they knew the reading interests of their female pupils. Also revealed was the fact that teachers, generally, know the reading interests of their pupils as a group to a significant extent.

II. CONCLUSIONS

Phase I of the study was concerned with the reliability of children's responses to the instrument over a long and a short term. Since highly significant coefficients of correlation were calculated for both the long and short periods of time, it appears that the instrument is reliable under the testing conditions outlined in the study. Results of the pilot study indicated that the forty-four items were neither ambiguous, nor difficult for grade five pupils to understand. It would appear that the standard instructions, given by the investigator on each occasion that the cards were sorted, were sufficiently clear and consistent. Since the children's responses to the instrument were reliable to a significant extent, it would seem appropriate to use the instrument, under similar conditions, to investigate the change in children's reading interests over various periods of time.

Phase II of the study surveyed the reading interests of today's grade five boys and girls. Similarities and differences in reading interests were pointed out. From these, some conclusions can be drawn. Boys and girls share an interest in stories that contain elements of action, excitement, and adventure. Boys and girls also have separate reading interests, with boys preferring dangerous, violent adventure stories, while girls' interests are of a tamer nature. A few dislikes in reading interests are shared by boys and girls, the main one being stories that moralize.

This phase of the study also gives an indication of the direction in which children's reading interests have changed since the last comprehensive survey (Norvell, 1958). It is important to note here that, although Norvell's study was published eleven years ago, it was twenty-five years in process. This means that there could be a gap of a generation between Norvell's results and the results of the present study. Norvell found that boys ranked biographies, animal stories, myths, legends, and hero tales as most interesting to them. Today's grade five boy has placed science fiction in first place, followed by war stories, mystery stories, space travel, detective stories, outdoor sports stories, and wild animal stories. It seems logical to conclude that some of these choices are a reflection of the exciting times we live in, and of the influence of the media of mass communication. Modern stories seem to be replacing the classic legends, myths, and hero tales. Only stories of wild animals have retained their popularity with boys. The conclusion can be drawn that boys still like a high level of excitement and action in their stories, but they prefer a modern setting.

Norvell found that girls ranked animal stories and biographies first, followed by girls' books and animal stories. It is evident that girls' likes in fiction have changed, as they are now most interested in reading mystery stories, stories of romantic love, science fiction, wild animal stories, and detective stories. Girls'

reading interests would be subjected to the same influences as boys' reading interests, mainly modern, scientific inventions and mass communication media. It can be concluded that today's girls are looking for a higher level of excitement and action than did the girls of the previous generation, and that they have broader, more mature reading interests.

Phase III of the study was concerned with the extent to which teachers knew the reading interests of individuals in their classrooms. It was found that the teachers participating in this study knew the reading interests of their male pupils much better than they knew the reading interests of their female pupils. It was also found that the teachers knew the reading interests of their pupils as a group to a significant extent. Definite conclusions cannot be drawn nor generalizations made from these findings because of the small number of teachers participating in the research. However, it appears that the teachers participating in this study knew the reading interests of pupils in general better than did the teachers involved in Norvell's study. Norvell found that the selection of children's reading interests could have been done as well by random choice as by teachers' predictions. There are no studies known to the investigator in which teachers predict reading interests of individuals in their classrooms, therefore no comparisons can be made.

III. IMPLICATIONS

The results of this study have implications of interest and value to teachers and librarians. The frequency distribution of reading interests of boys and of girls has shown definite sex differences at the age and grade studied. Further, an examination of Tables I and II reveals many differences within sex. This gives an indication that a general knowledge of children's reading interests is not sufficient to enable teachers to provide the best possible programs for individuals in their classrooms. It is necessary for teachers to perceive the reading interests of each child. This can be done by making use of interest inventories, questionnaires, observation, and interviews. Also, since the instrument developed in this research has proved to be reliable to a significant extent, it would seem appropriate to use it to ascertain reading interests of individuals.

This study has implications for teachers regarding the planning of reading, literature, and language lessons. Boys and girls indicate that they have some reading interests in common, mainly mystery stories, science fiction, stories of dangerous and exciting happenings, and wild animal stories. It would appear that teachers could maintain a high level of interest and participation by the pupils if they made use of this fact, and chose literature from those areas for lessons and activities planned for boys and girls together. Teachers should also bear in mind the common dislikes boys and girls

have regarding reading interests, and avoid them when planning for the whole class.

It has been noted by the investigator that boys often have difficulty finding suitable reading material in the school library. Since it has been found that girls have more varied reading interests in fiction, and read more widely than boys do, girls can find interesting books more readily than boys can. This has implications for librarians and teachers who are responsible for book selection. It is suggested that they should concentrate more on ordering books that boys find interesting.

Although generalizations cannot be made from the findings of Phase III of the study because of the small number of teachers involved, some implications can be suggested. That the teachers knew the reading interests of their male pupils much better than those of their female pupils suggests that the reading interests of the pre-adolescent girl deserve more attention from teachers. Further, though the significant but low correlation of teacher predictions and pupil responses indicates an improvement over the findings of Norvell's study, it is apparent that teachers should concentrate more on knowing the reading interests of individuals in their classrooms.

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APPENDIX A
READING INTEREST CARDS

**Mystery
stories**

19

**A story
about the life
of a
famous man**

8

**The classic or
old fairy tales
such as The
Ugly Duckling,
Snow White,
Cinderella**

10

**Adventure
stories about
dangerous
and exciting
happenings**

21

APPENDIX B

WORKSHEET USED IN SORTING CARDS

Name _____

I.D. _____

Sex _____

2 cards

5 cards

9 cards

12 cards

9 cards

5 cards

2 cards

**Would MOST
like to read**

**Would LEAST
like to read**

B29911